LCD-Monitor

Chassis	Model
LBH40TS	400Txn
	400Pxn
LBH40PS	400PX

SERVICE Manual

TFT-LCD Monitor

Feature

- ▶ VMB (Vertical Marketing Business) Model
- ▶ MFM ((Multi Function Monitor): Compatible with various sources including PC (DVI, AV, RF, S-video, Component)
- ▶ Adopting Response Time 8ms SPVA
- ▶ SRS Trusurround supplied
- ▶ RS232 Remote Control (MDC software supplied)
- ▶ Video Input : PC(D_SUB,DVI), BNC, DVI, Component, AV, S-Video, RF
- ▶ Audio Input : PC(D_SUB,DVI) Stereo, Video (AV, S-Video) , Component, BNC
- ▶ Video & Audio Output : PC, BNC, AV, S-Video, Component Output, Speaker Output
- ▶ 10W x 2 External Speaker
- ▶ PIP On timer function : The PIP automatically pops up after the time setting
- ▶ PIP, OSD Menu Transparency Adjustment
- ▶ Off timer function
- ▶ Wall & Ceiling Mounting (Optional VESA Wall Mount Kit)
- ▶ Supporting Network function

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LBH40TS Service Manual

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1 Precautions

Follow these safety, servicing and ESD precautions to prevent damage and to protect against potential hazards such as electrical shock.

1-1 Safety Precautions

1-1-1 Warnings

1. For continued safety, do not attempt to modify the circuit board.
2. Disconnect the AC power and DC power jack before servicing.

1-1-2 Servicing the LCD Monitor

1. When servicing the LCD Monitor, Disconnect the AC line cord from the AC outlet.
2. It is essential that service technicians have an accurate voltage meter available at all times. Check the calibration of this meter periodically.

1-1-3 Fire and Shock Hazard

Before returning the monitor to the user, perform the following safety checks:

1. Inspect each lead dress to make certain that the leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the monitor.
2. Inspect all protective devices such as nonmetallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
3. Leakage Current Hot Check (Figure 1-1):

   WARNING : Do not use an isolation transformer during this test.

   Use a leakage current tester or a metering system that complies with American National Standards Institute (*ANSI C101.1, Leakage Current for Appliances*), and Underwriters Laboratories (*UL Publication UL1410, 59.7*).

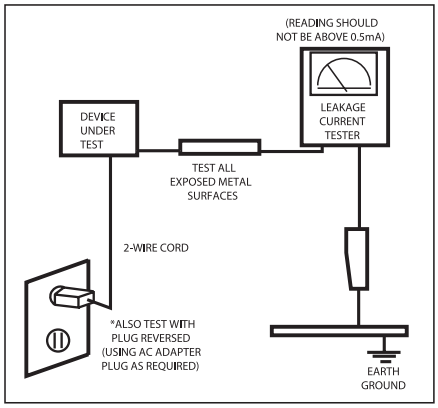


Figure 1-1. Leakage Current Test Circuit

4. With the unit completely reassembled, plug the AC line cord directly into a 120V AC outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

1-1-4 Product Safety Notices

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection. The protection they give may not be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by ⚠ on schematics and parts lists. A substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.

1-2 Servicing Precautions

WARNING: An electrolytic capacitor installed with the wrong polarity might explode.

Caution: Before servicing units covered by this service manual, read and follow the Safety Precautions section of this manual.

Note: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions, always follow the safety precautions.

1-2-1 General Servicing Precautions

1. Always unplug the unit's AC power cord from the AC power source and disconnect the DC Power Jack before attempting to:
   (a) remove or reinstall any component or assembly, (b) disconnect PCB plugs or connectors, (c) connect a test component in parallel with an electrolytic capacitor.
2. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
3. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the area around the serviced part has not been damaged.
4. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
5. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500 V) to the blades of the AC plug.

   The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
6. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

1-3 Static Electricity Precautions

Some semiconductor (solid state) devices can be easily damaged by static electricity. Such components are commonly called Electrostatically Sensitive Devices (ESD). Examples of typical ESD are integrated circuits and some field-effect transistors. The following techniques will reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. To avoid a shock hazard, be sure to remove the wrist strap before applying power to the monitor.
2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of an electrostatic charge.
3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.
4. Use only a grounded-tip soldering iron to solder or desolder ESDs.
5. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
7. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution: Be sure no power is applied to the chassis or circuit and observe all other safety precautions.
8. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.

1-4 Installation Precautions

1. For safety reasons, more than two people are required for carrying the product.

2. Keep the power cord away from any heat emitting devices, as a melted covering may cause fire or electric shock.

3. Do not place the product in areas with poor ventilation such as a bookshelf or closet. The increased internal temperature may cause fire.

4. Bend the external antenna cable when connecting it to the product. This is a measure to protect it from being exposed to moisture. Otherwise, it may cause a fire or electric shock.

5. Make sure to turn the power off and unplug the power cord from the outlet before repositioning the product. Also check the antenna cable or the external connectors if they are fully unplugged. Damage to the cord may cause fire or electric shock.

6. Keep the antenna far away from any high-voltage cables and install it firmly. Contact with the high-voltage cable or the antenna falling over may cause fire or electric shock.

7. When installing the product, leave enough space (10cm) between the product and the wall for ventilation purposes.
   A rise in temperature within the product may cause fire.

Memo

2 Product specifications

2-1 Development Background

¢º Expansion of Wide LCD Product Market (Public facilities like airport, theater, etc.)

¢º Improving the picture quality and enhancing the extra features compatible to the current model

¢º Securing competitiveness with the strengthen Network Option and keeping up the user convenience

2-1-1 Fashion Feature

VMB (Vertical Marketing Business) Model

- MFM ((Multi Function Monitor) :

  Compatible with various sources including PC (DVI, AV, RF, S-video, Component)
- Adopting Response Time 8ms SPVA
- SRS Trusurround supplied
- RS232 Remote Control (MDC software supplied)
- Video Input : PC(D_SUB,DVI), BNC, DVI, Component, AV, S-Video, RF
- Audio Input : PC(D_SUB,DVI) Stereo, Video (AV, S-Video) , Component, BNC
- Video & Audio Output : PC, BNC, AV, S-Video, Component Output, Speaker Output
- 10W x 2 External Speaker
- PIP On timer function : The PIP automatically pops up after the time setting
- PIP, OSD Menu Transparency Adjustment
- Off timer function
- Wall & Ceiling Mounting (Optional VESA Wall Mount Kit)
- Supporting Network function

2-2 Specifications

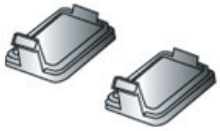
Item		Description
LCD Panel		LTA400WT-L01, 40 inch 885.162(H) x 497.664(V)
Scanning Frequency	Horizontal	30~70kHz
	Vertical	50~85Hz
Display Colors		16.7 Million colors
Maximum Resolution	Horizontal	1366 Pixels
	Vertical	768 Pixels
Input Video Signal		0.7 Vp-p ± 5% positive at 75Ω, Digital, TMDS internally terminated
Input Sync Signal		Type : separate H/V sync, Composite, automatic synchronization without external switch Level : TTL level
Active Display Horizontal/Vertical		871.68 ± 3 mm (H) / 523.008 ± 3 mm (V)
AC power voltage & Frequency		AC 90~264V, 60 Hz/50 Hz ± 3 Hz
Power Consumption(DPMS)		230W(w/o option), 1W(Energy saving mode)
Brightness		500cd/m^2
Contrast Ratio		1200:1
Response Time		8 ms
Range of vision angle (Left/Right/UP/Down)		89 ° / 89 ° / 89 ° / 89 °
PC Input		D-SUB, DVI
Video System		AV, S-Video, Component
Sound Output		Max.10W x 2ch
Dimensions (W x H x D)		
Set		971 X 582 X 118 mm (W X H X D) 971 X 629.5 X 223 mm (W X H X D) (With Stand) - OPTION 1181 X 582 X 118 mm (W X H X D) (With Speaker) - OPTION 1181 X 629.5 X 223 mm (W X H X D) (With Speaker,With Stand) - OPTION
Package		37.3 x 12.2 x 26.9 Inches (947.0 x 309.0 x 684.0 mm)
Weight (Set/Package)		① Set : 23 kg (After installation of Stand) Package : 27 kg ② Set (With Stand - (Option) : 30 kg ③ Set (With Speaker - (Option) : 33 kg
Environmental Considerations		Operating Temperature : 50° F ~ 104° F (10℃ ~ 40℃) Operating Humidity : 10% ~ 80% Storage Temperature : -4° F ~ 113° F (-20℃ ~ 45℃) Storage Humidity : 5% ~ 95%
-Designs and specifications are subject to change without prior notice.		

2-3 Spec Comparison to the Old Models

Model		400Txn	400Pn
Design			
Panel		40"(1366x768),SPVA	40"(1366x768),PVA
Panel Spec.		500cd/m^2, 1200 : 1, 178/178, 8ms	500cd/m^2, 800 : 1, 18/178, 8ms
Input	PC	D-Sub, DVI-D, BNC	D-Sub, DVI-D, BNC
	Video	S-video, CVBS, Component	S-video, CVBS, Component
	TV	Tunner Option	-
Speaker		10 Watts x 2 ch SRS Trusrround	10 Watts x 2 ch VR Dolby, BBE

2-4 Accessories

Product	Description	Ccde. No	Remark
	Quick Setup Guide	BH68-00376L	
	Warranty Card (Not available in all locations)	BH68-70438A	
	User's Guide,MDC software, Natural Color software, MagicNet software	BN59-00363L	
	D-Sub(15 Pin) Cable	BN39-00244B	
	Power Cord	3903-000042	
	BNC to RCA Adapter Jack ×4	3705-001262	
	Semi Stand	BN96-00452E	
	Screw (4EA) TAPTITLE : M4 × L15	6003-001026	

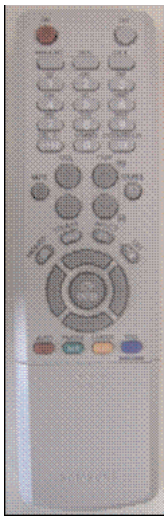
Product	Description	Ccde. No	Remark
	Remote Control	BN59-00464A	
	Batteries (AAA x 2)	4301-000121	
	Cover-Hole	BN96-00597C	

2-5 Accessories(Sold Separately)

Product	Description	Ccde. No	Remark
	Wall mount KIT		Model: WMB-4050P
	Speaker Set	BN96-01806A	
	Stand KIT	BN96-00428C	
	DVI Cable	3701-001173	
	LAN Cable	BH39-00211A	
	RS232C Cable	BN39-00341A	

3 Alignment and Adjustments

3-1 Service Mode



3-1-1 Entering the Factory menu on the Main board(using REMOCON)

- Power OFF -> INFO -> MENU -> MUTE -> Power ON

-When use the Factory remote control : INFO + Factory

3-1-2 Network Board Reset

- Check the BAT2400 battery status

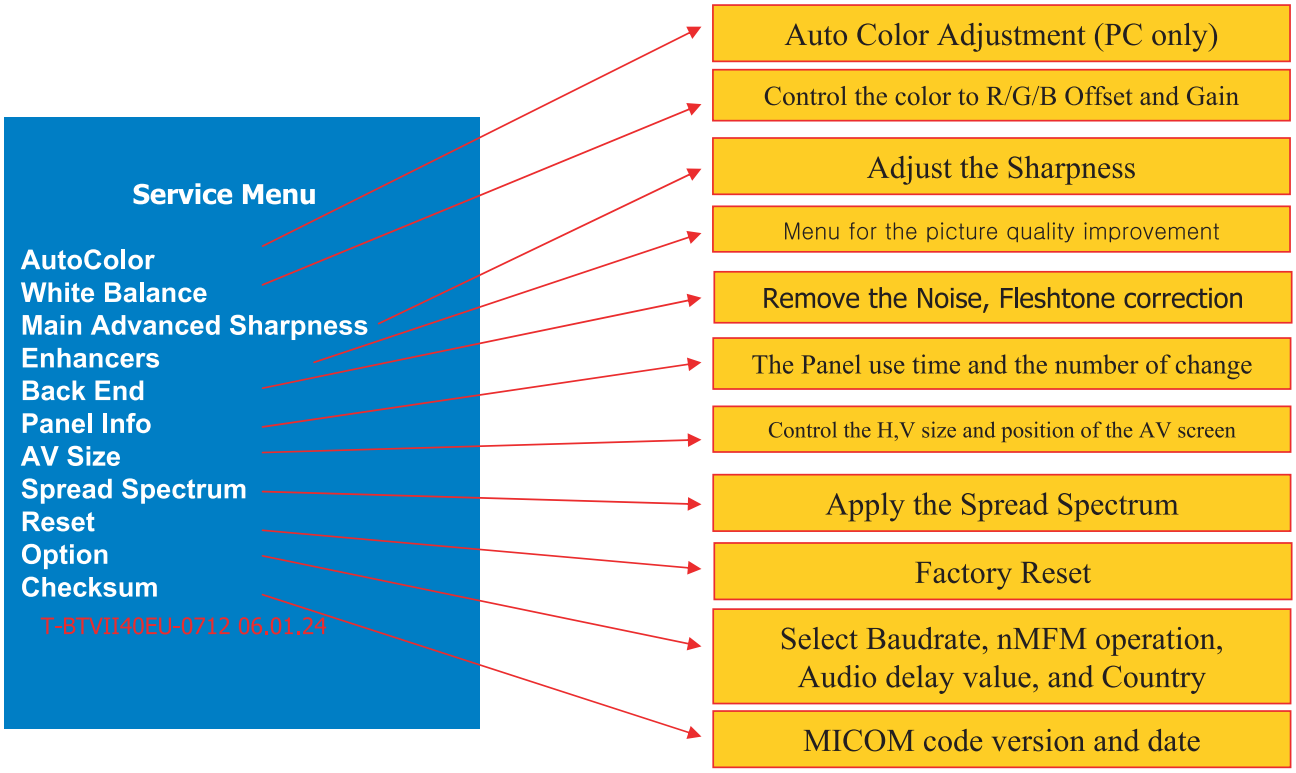
- Move the jumper of the CN2400 connector in the following order:
  Pin 1,2 -> Pin 2,3 -> Pin 1,2

3-2 Entering the Service Mode(using REMOCON)

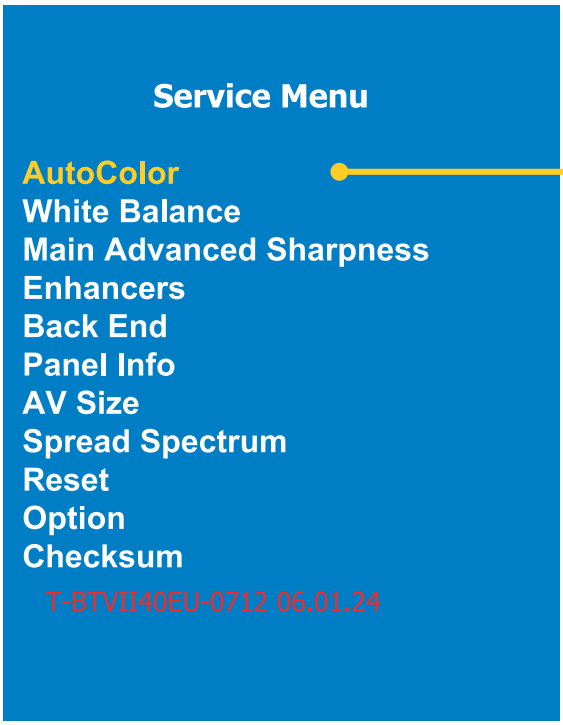
(1) Power Off + MUTE + 1+ 8 + 2 + Power On

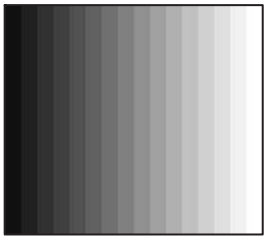
(2) INFO + FACTORY (using the factory remote control)

3-3 Service Mode Menu



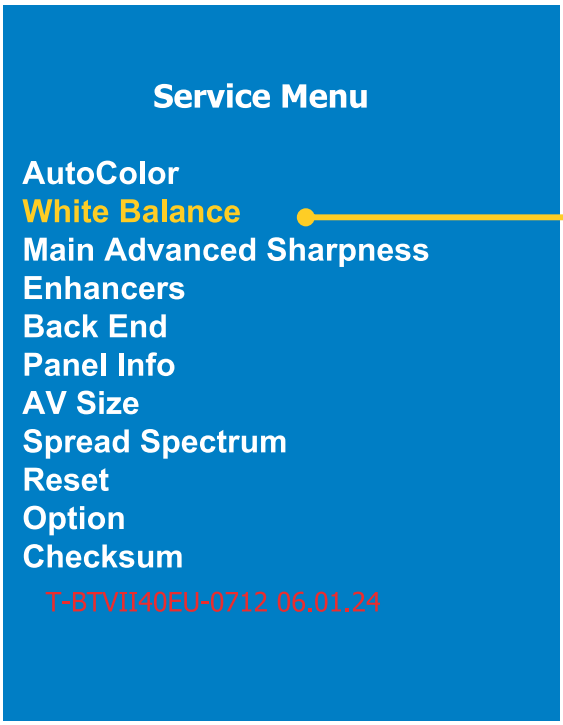
- AutoColor Part



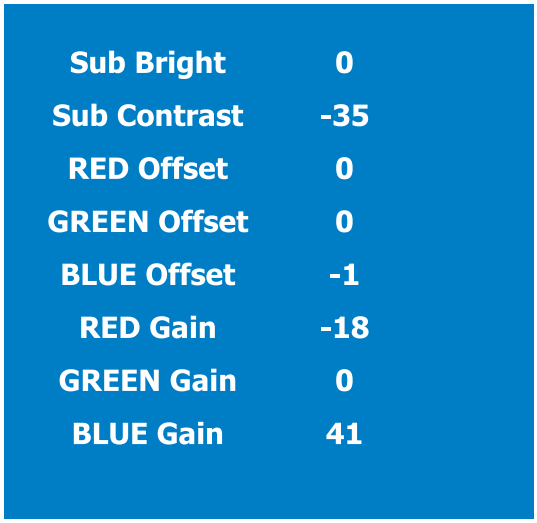


PC analog Only (1024x768@60 16gray pattern)
The Color Control properly operates only in the certain pattern with certain mode and the color warps in other patterns and modes. Also the proper color control is not supported in the mode other than XGA 60Hz.

- White Balance Part

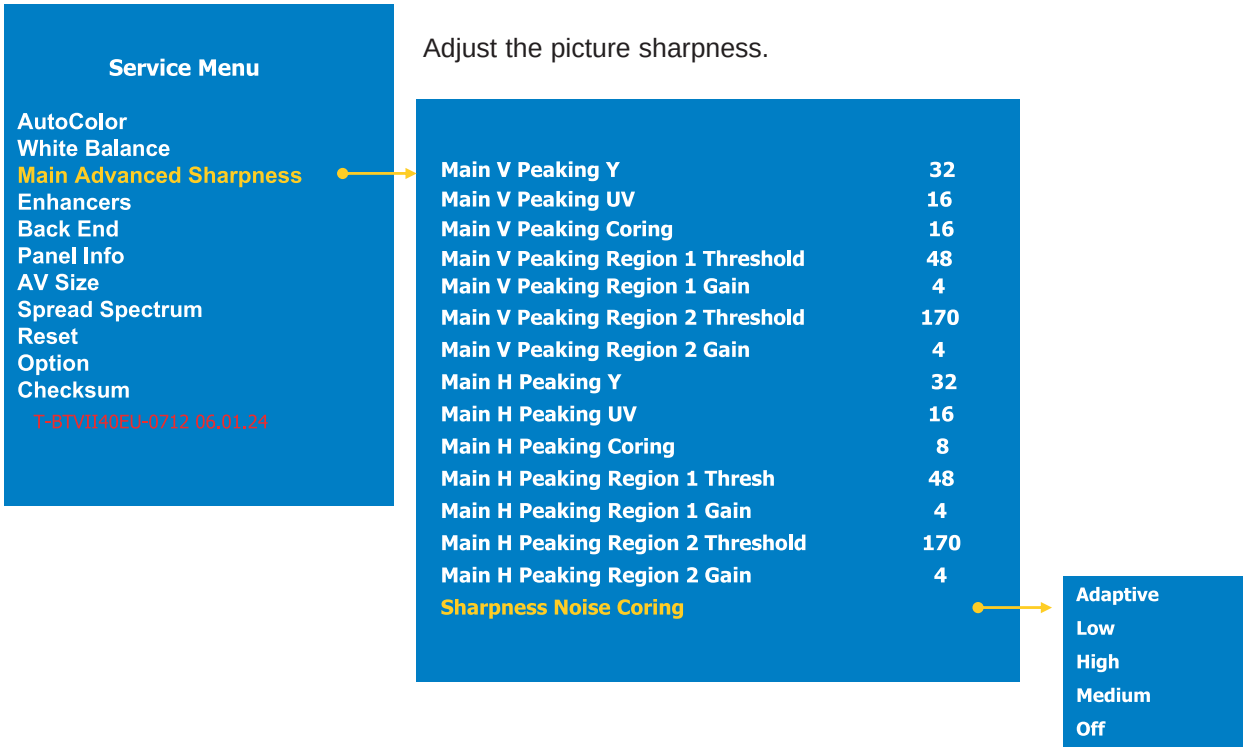


Use to adjust the color tone.
Be sure not to set the color value too high to prevent the color saturation.



Register value in the Scaler
RED / BLUE / GREEN
Adjust the Gain and Offset

- Sharpness Part (1)



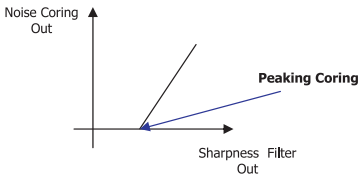
Adjust the picture sharpness.

- Sharpness Part (2)

Main V Peaking Y
Main V Peaking UV
Main V Peaking Coring
Main V Peaking Region 1 Threshold
Main V Peaking Region 1 Gain
Main V Peaking Region 2 Threshold
Main V Peaking Region 2 Gain
Main H Peaking Y
Main H Peaking UV
Main H Peaking Coring
Main H Peaking Region 1 Threshold
Main H Peaking Region 1 Gain
Main H Peaking Region 2 Threshold
Main H Peaking Region 2 Gain
Sharpness Noise Coring

Scaling Filter Sharpness Control - Peaking Y / Peaking UV
This adjusts the sharpness of luminance(Y) and color(UV). The bigger the number is in the range of 1~127, the clearer the picture is. The bigger the number is in the range of 128~255, the more natural video is. Too high sharpness may cause the vivid noise.

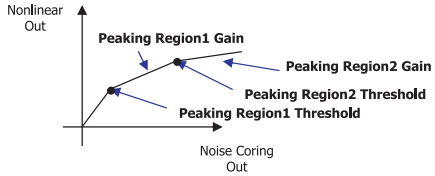
Noise Coring Control - Peaking Coring
Display only the sharp large-edge without assuming the small-edge of the video as a noise and amplifying it.



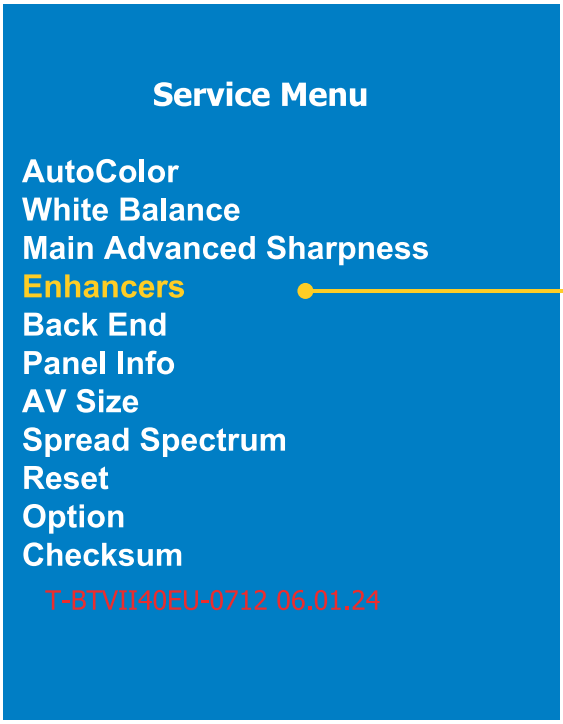
Assign the threshold value to improve the sharpness.

H : Horizontal
V : Vertical

NonLinear Sharpness Control - Peaking Resion1/2 Threshold, Gain
Divide the frequency area and apply the different Gain for each area rather than evenly apply the sharpness level over the whole image.



- Enhancers Part



Adjust to display the clear and sharp image.
This function is used to adjust the appropriate value for each target region. Change only when it is needed.

HLE Threshold	10
HLE Gain	180
HDP Threshold	21
HDP Gain	71
HCE Threshold	15
HCE Gain	25
VDP Threshold	27
VDP Gain	3

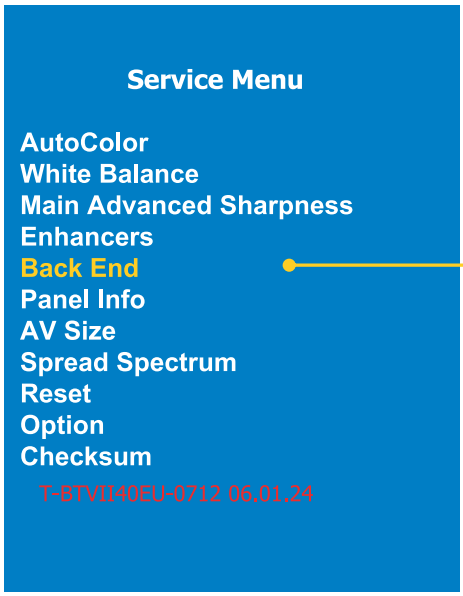
HLE : Horizontal Large Edge Enhancer

HDP : Horizontal Detail Processor

HCE : Horizontal Chroma Enhancer

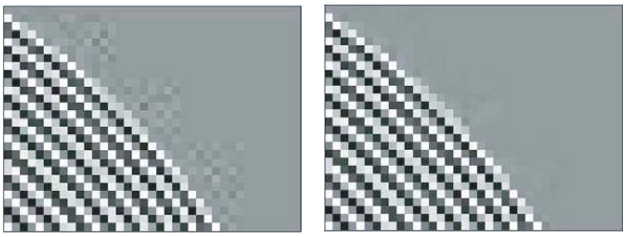
VDP : Vertical Detail Processor

- Back End Part



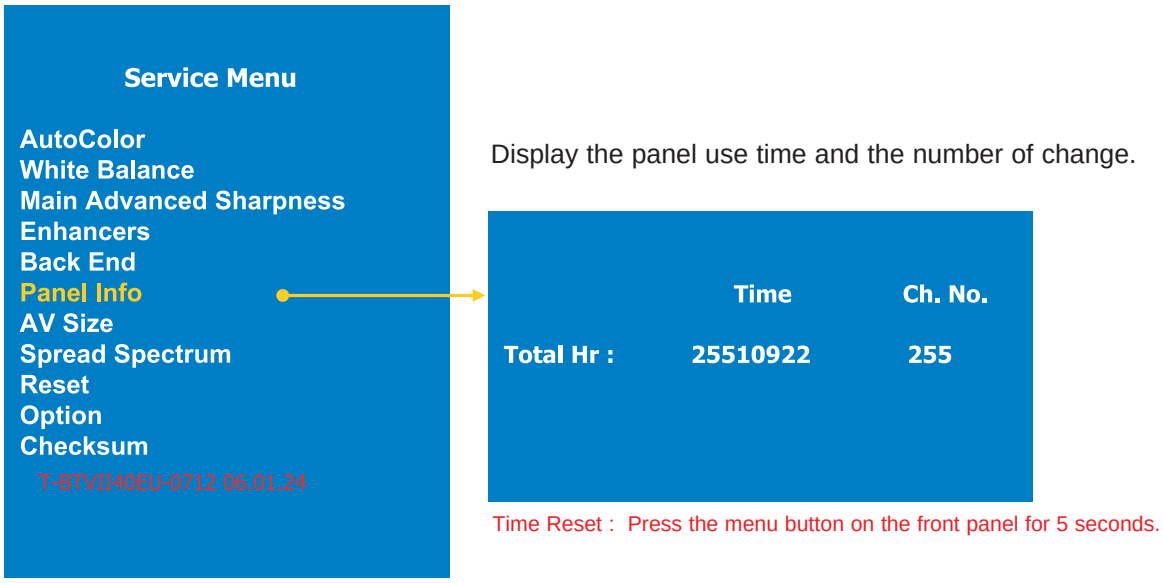
The MPEG NR menu is used to reduce the Mosquito noise and Gaussian noise. The Fleshtone menu is used to display the natural skin color.

Gamma	Off
LCD Overdrive Noise Coring	Adaptive
MPEG NR Mode	MOSQ_GAUSS
MPEG NR Threshold0	28
MPEG NR Threshold1	15
MPEG NR Threshold2	40
Non ACM Fleshtone Correction	Off
Non ACM Fleshtone Correction Level	0
Non ACM Fleshtone Balance	0

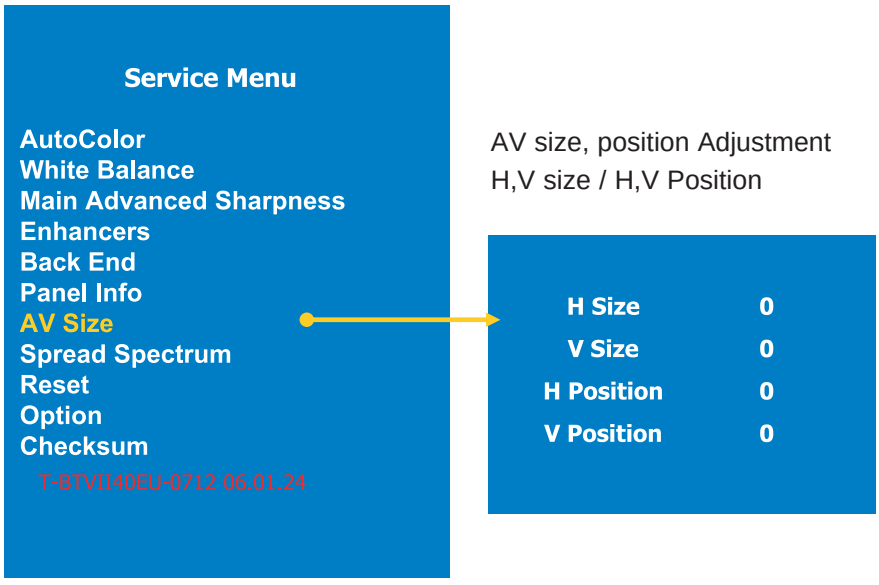


Mosquito Noise Reduced Mosquito Noise

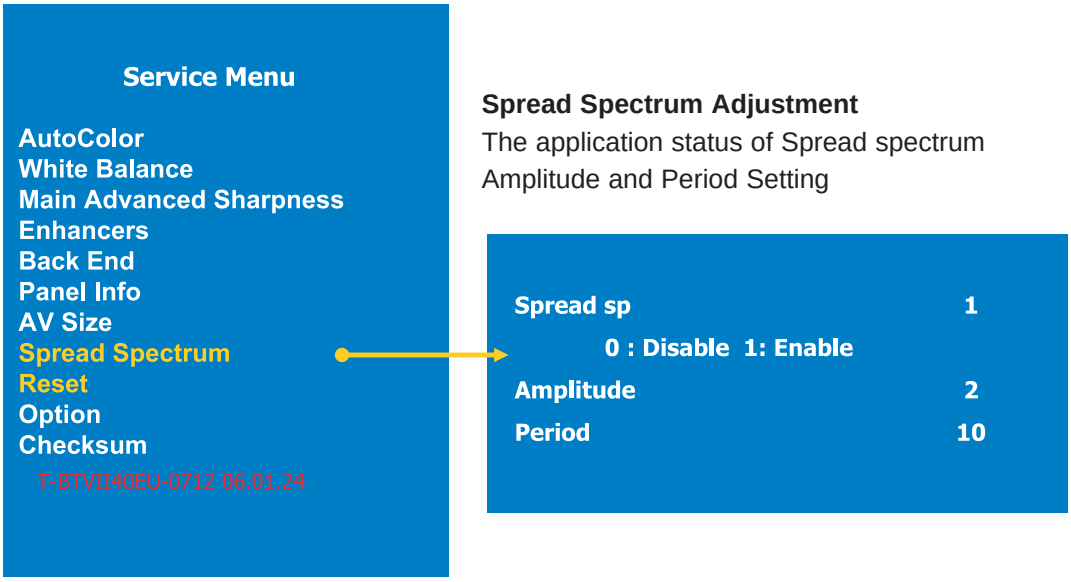
- Panel Info Part



- AV Size Part



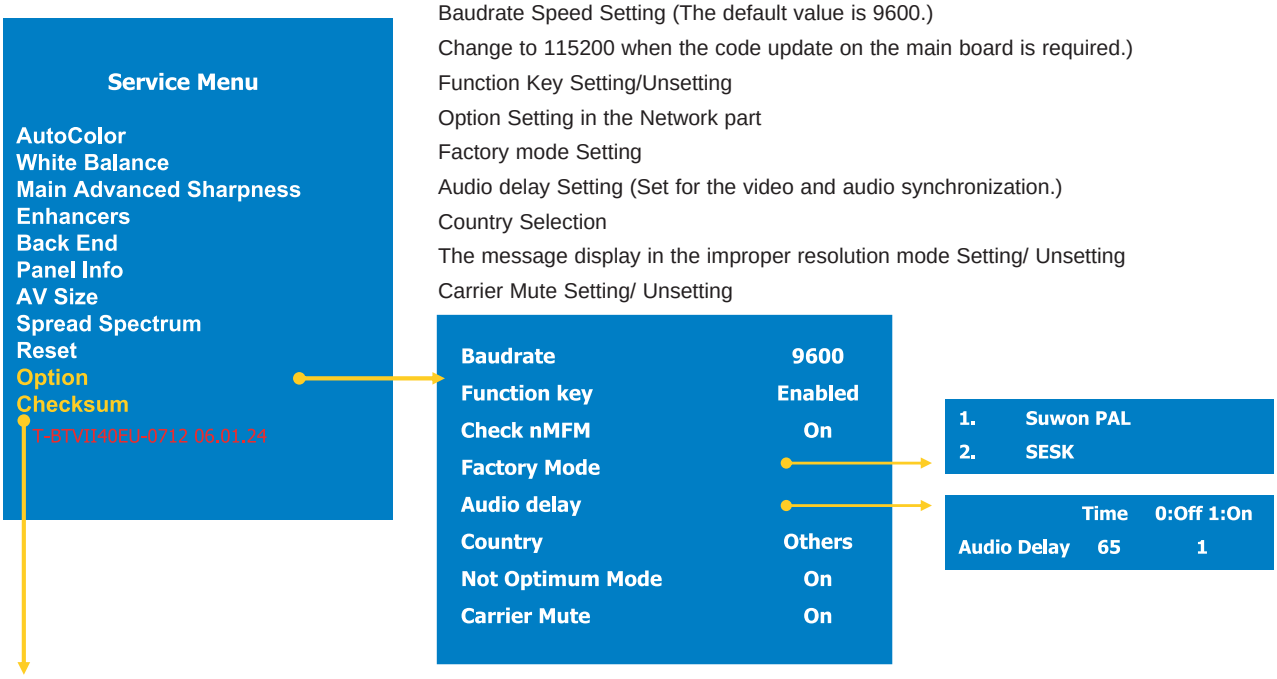
- Spread Spectrum/Reset Part



Spread Spectrum Adjustment
The application status of Spread spectrum
Amplitude and Period Setting

Reset : Factory Reset
Reset the setting on the Service Menu to the default setting.
Need to turn the Power On/Off after reset

- Option Part



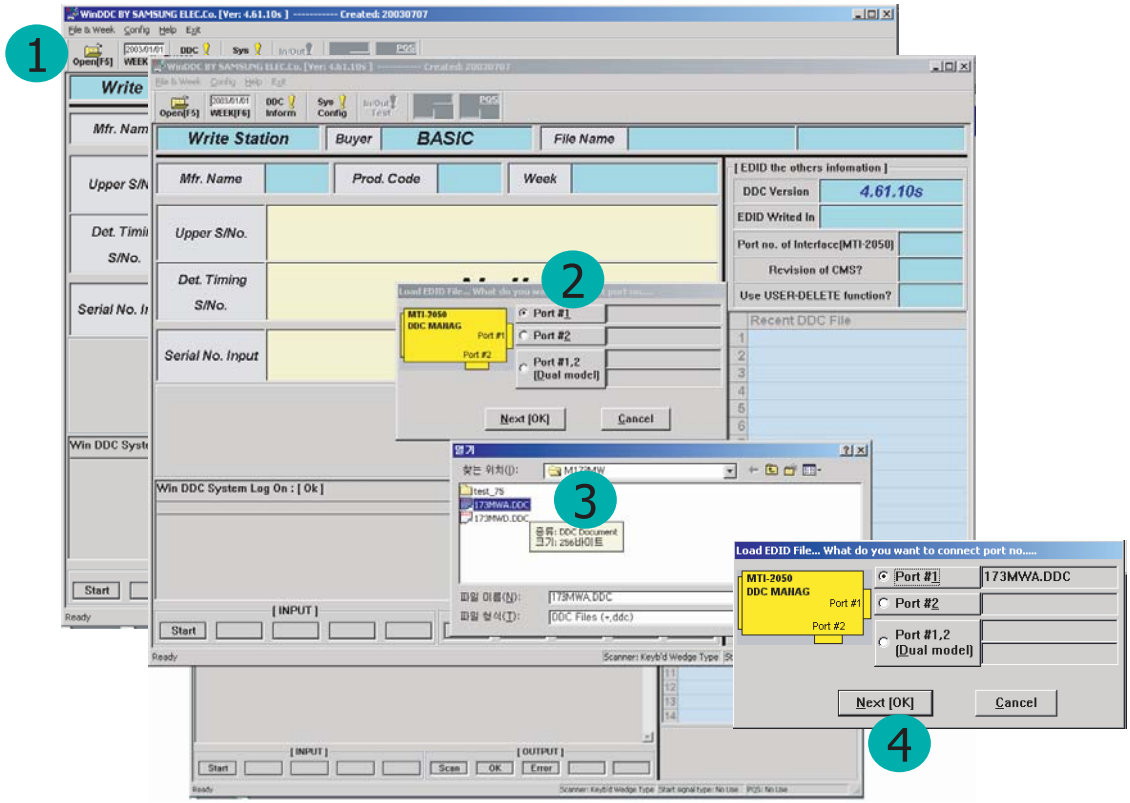
Option Adjustment
Baudrate Speed Setting (The default value is 9600.)
Change to 115200 when the code update on the main board is required.)
Function Key Setting/Unsetting
Option Setting in the Network part
Factory mode Setting
Audio delay Setting (Set for the video and audio synchronization.)
Country Selection
The message display in the improper resolution mode Setting/ Unsetting
Carrier Mute Setting/ Unsetting

Checksum
The 4 digit serial number regarding the micom code is displayed if you select this.

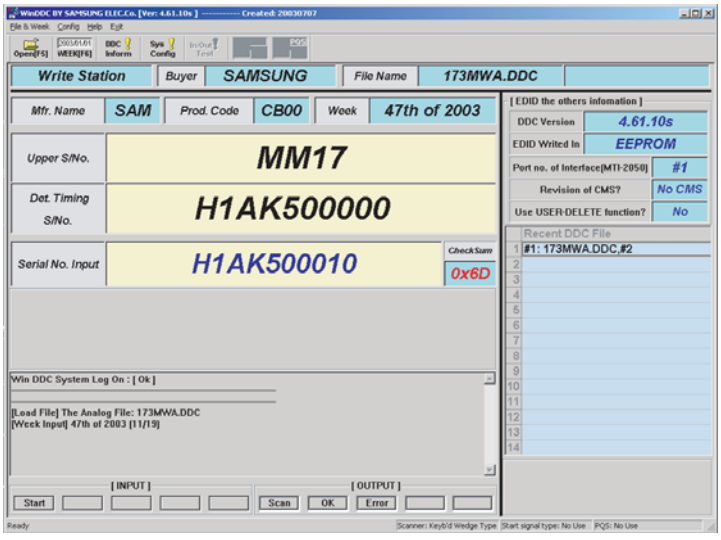
3-4 DDC Input Process

(DDC file number : SM400PXnA.DDC / SM400PXnD.DDC)

The DDC input is available after entering the Service Mode. : Cancel the DDC Protection.



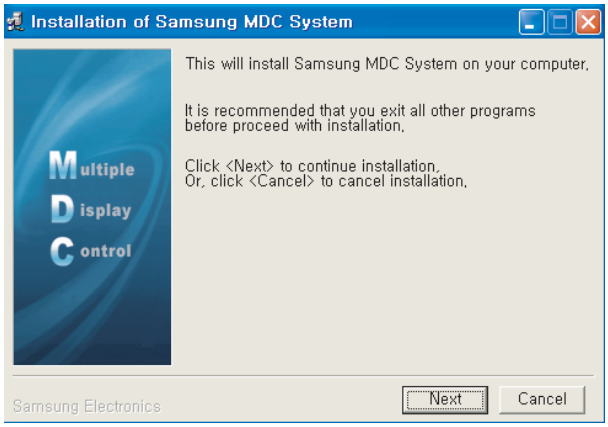
1. Open the file.
2. Select Port 1 (D-SUB) / Select Port 2(DVI)
3. Select the DDC file.
4. Click the Next(OK) button.



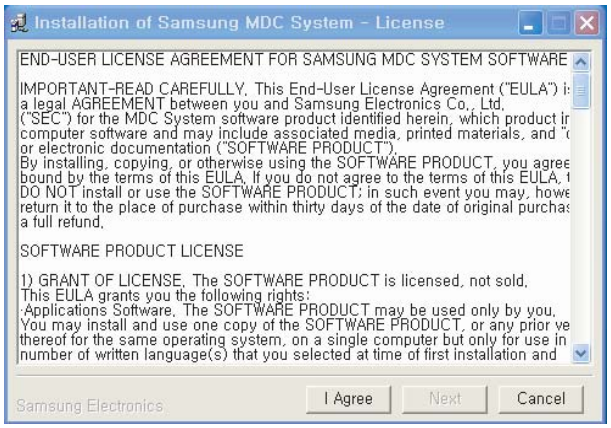
5: Input the monitor serial number and press Enter.

Input Analog and repeat 2~5 times when input Digital.

3-5 MDC(Multi Display Control) Program


Installation of Samsung MDC System
This will install Samsung MDC System on your computer.
It is recommended that you exit all other programs before proceed with installation.
Click <Next> to continue installation,
Or, click <Cancel> to cancel installation.
Multiple Display Control
Samsung Electronics
Next
Cancel

1. Run the SETUP. EXE file.


Installation of Samsung MDC System - License
END-USER LICENSE AGREEMENT FOR SAMSUNG MDC SYSTEM SOFTWARE
IMPORTANT-READ CAREFULLY. This End-User License Agreement ("EULA") is a legal AGREEMENT between you and Samsung Electronics Co., Ltd. ("SEC") for the MDC System software product identified herein, which product includes computer software and may include associated media, printed materials, and "online" or electronic documentation ("SOFTWARE PRODUCT").
By installing, copying, or otherwise using the SOFTWARE PRODUCT, you agree to be bound by the terms of this EULA. If you do not agree to the terms of this EULA, DO NOT install or use the SOFTWARE PRODUCT; in such event you may, however return it to the place of purchase within thirty days of the date of original purchase for a full refund.
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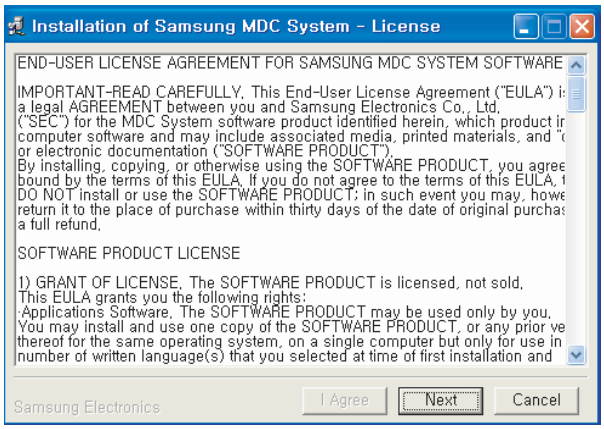
1) GRANT OF LICENSE. The SOFTWARE PRODUCT is licensed, not sold. This EULA grants you the following rights:
·Applications Software. The SOFTWARE PRODUCT may be used only by you. You may install and use one copy of the SOFTWARE PRODUCT, or any prior version thereof for the same operating system, on a single computer but only for use in the number of written language(s) that you selected at time of first installation and
Samsung Electronics
I Agree
Next
Cancel

2. Select I Agree.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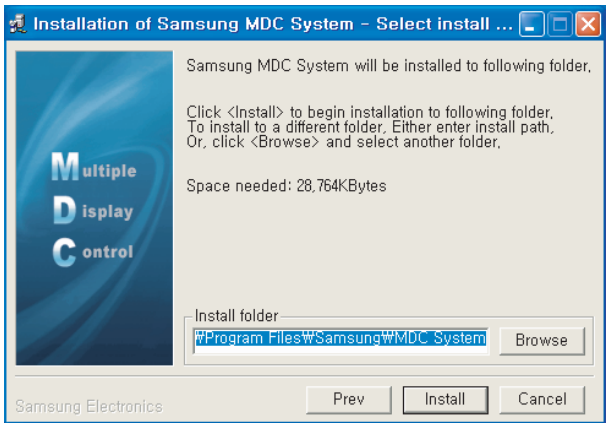
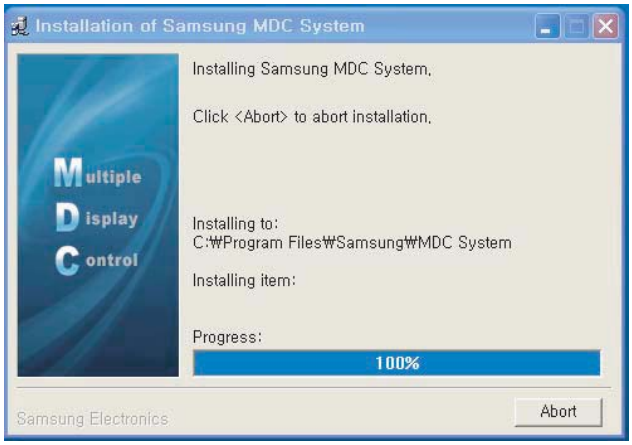
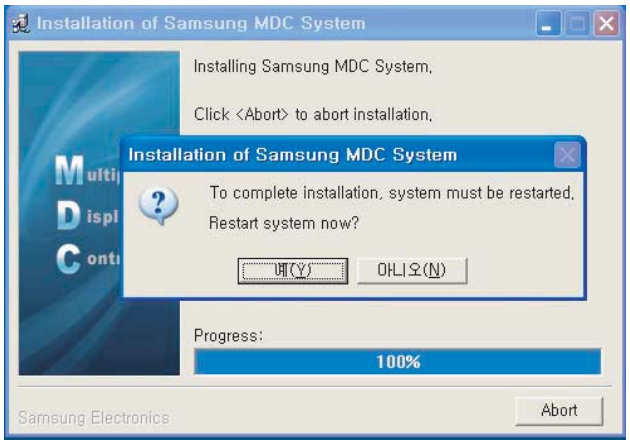
IMPORTANT-READ CAREFULLY. This End-User License Agreement ("EULA") is a legal AGREEMENT between you and Samsung Electronics Co., Ltd. ("SEC") for the MDC System software product identified herein, which product includes computer software and may include associated media, printed materials, and "online" or electronic documentation ("SOFTWARE PRODUCT").
By installing, copying, or otherwise using the SOFTWARE PRODUCT, you agree to be bound by the terms of this EULA. If you do not agree to the terms of this EULA, DO NOT install or use the SOFTWARE PRODUCT; in such event you may, however return it to the place of purchase within thirty days of the date of original purchase for a full refund.
SOFTWARE PRODUCT LICENSE
1) GRANT OF LICENSE. The SOFTWARE PRODUCT is licensed, not sold. This EULA grants you the following rights:
·Applications Software. The SOFTWARE PRODUCT may be used only by you. You may install and use one copy of the SOFTWARE PRODUCT, or any prior version thereof for the same operating system, on a single computer but only for use in the number of written language(s) that you selected at time of first installation and
Samsung Electronics
I Agree
Next
Cancel

3. Select NEXT.


Installation of Samsung MDC System - Select install ...
Samsung MDC System will be installed to following folder.
Click <Install> to begin installation to following folder.
To install to a different folder, Either enter install path,
Or, click <Browse> and select another folder.
Space needed: 28,764KBytes
Multiple Display Control
Install folder
₩Program Files₩Samsung₩MDC System
Browse
Samsung Electronics
Prev
Install
Cancel

4. Select Install.



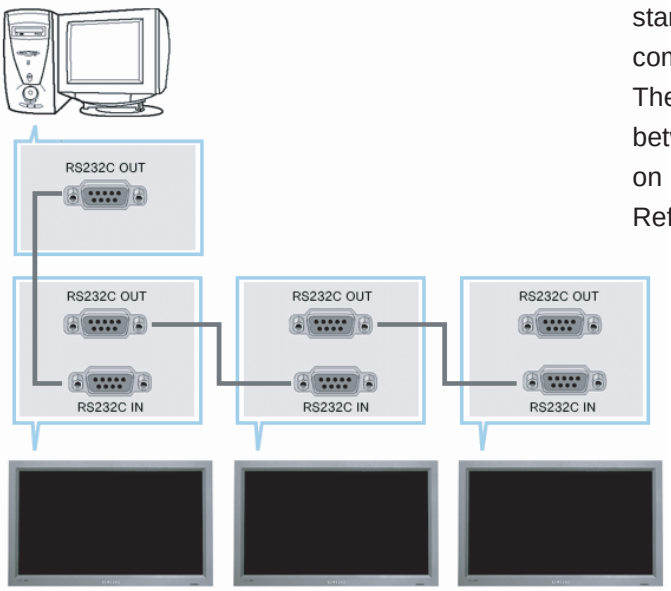


5. "Yes" Click.

6. "OK" Click.

3-6 MDC(Multi Display Control) Program_How to use

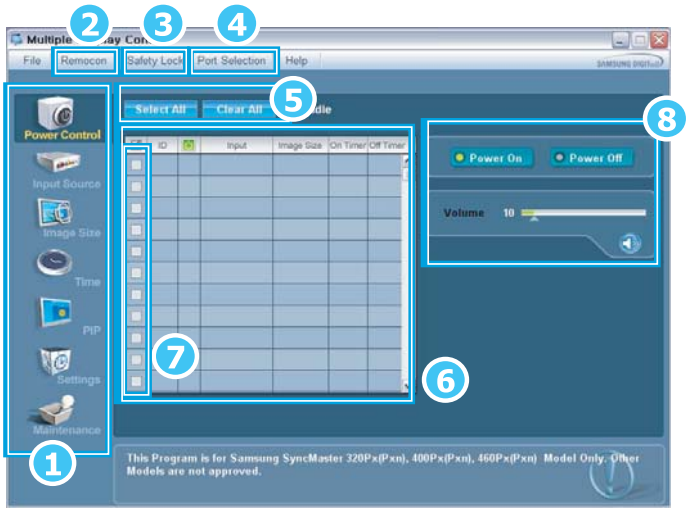
- Connect the serial port of the PC and Beethoven Board with the RS232C cable.
- Option in the Factory Menu : Check if BaudRate is set to 9600



A Multiple Display Control (MDC) is an application allowing various displays to be easily and simultaneously operated on a PC. RS-232C, a standard of serial communication, is used for the communication between a PC and a display. Therefore, a serial cable should be connected between the serial port on a PC and the serial port on a display.
Refer to the diagram.

- Start- Main Window

Click Start > Program > Multiple Display Control to start the program.
Select a set to see the volume of the selected set within the slider.

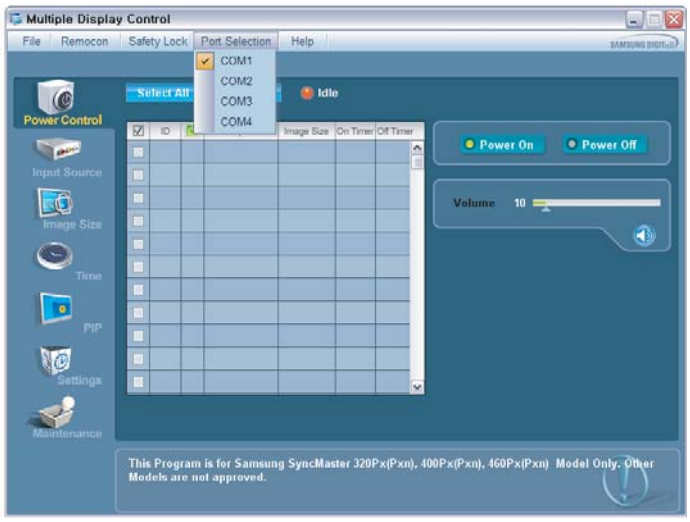


1. Click the main icons to switch into each screen.
2. Allows you to enable or disable the remote control signal receiving function of the display unit.
3. Use to lock monitor functions.
4. Use to change the port. The default port is COM1.
5. Use Select All and Clear All buttons to select or clear all displays.
6. Use Grid to view brief information on selected display.

The remote control Enable/Disable function operates whether or not the power is On/Off, and this applies to all displays connected to the MDC. However, all displays return to the default setting with the remote control receiving function enabled regardless of the status at the time the MDC is shut down

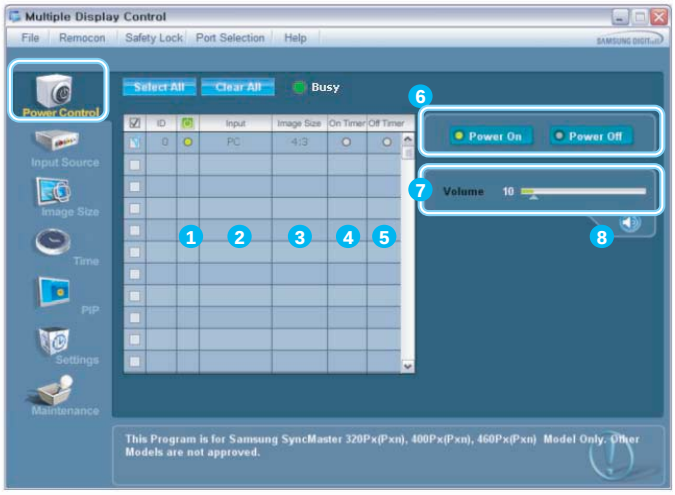
1 Main Icons
2 Remocon
3 Safety Lock
4 Port Selection
5 Safety Lock
6 Info Grid
7 Port Selection
8 Control Tools

- Start-Port Selection



1. Multiple Display Control is originally set to COM1.
2. If the port other than COM 1 is used, any port between COM1 to COM4 is selectable.
3. The port connected to the monitor and serial cable needs to be assigned with the correct name for the communications.
4. Once the port is selected, it is stored and used for the next program.

- Power Control



1. Click Power Control of the main icons to display the Power Control window.

- Info Grid shows some basic information necessary for Power Control.

1) Power Status
2) Input Source
3) Image Size
4) On Timer Status
5) Off Timer Status

2. Use the Select All button or Check Box to choose a display to control.
Power Control allows you to control functions regarding the power of the selected display on the menu.

6) Power On/Off
Turns the power of the selected display on or off.

7) Volume
Adjust the volume of the selected display.
The appropriate volume for the selected set is displayed as you select a set.
(When you cancel the selection or choose Select All, the volume returns to the default value 10.)

8) Mute On/Off
Turns on or off the Mute function of the selected monitor. The Power Control feature is available for all connected monitors.

- **The Volume Control and Mute features are available only for the displays whose power status is ON.**

-Input Source Control

1. Click Input Source of the main icons to display the Input Source control window.
   Click Select All or use Check Box to select a display to control.

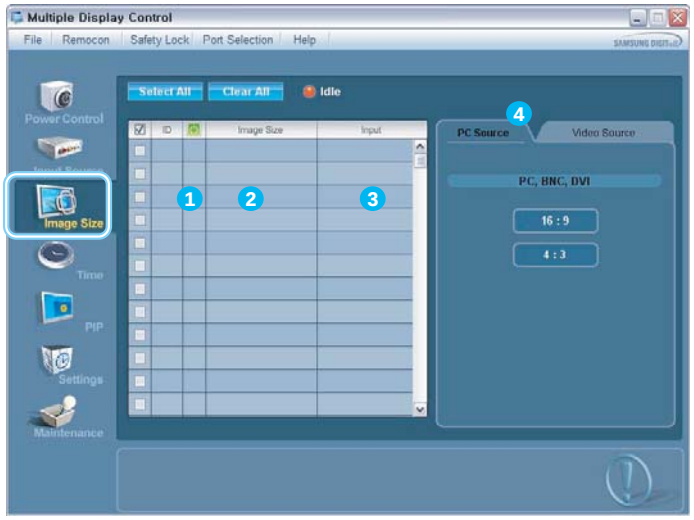
- Info Grid shows some basic information necessary to Input Source Control.

1) PC
   Changes the Input Source of the selected display to PC.
2) BNC
   Changes the Input Source of the selected display to BNC.
3) DVI
   Changes the Input Source of the selected display to DVI.
4) TV
   Changes the Input Source of the selected display to TV.
5) AV
   Changes the Input Source of the selected display to AV.
6) S-Video
   Changes the Input Source of the selected display to S-Video.
7) Component
   Changes the Input Source of the selected display to Component.
8) MagicNet
   The MagicNet input can be changed only in the MagicNet mode.

- The Input Source Control feature is available only for the display whose power status is ON.

-Image Size Control - PC, BNC, DVI

1. Click Image Size of the main icons to display the Image Size control window.



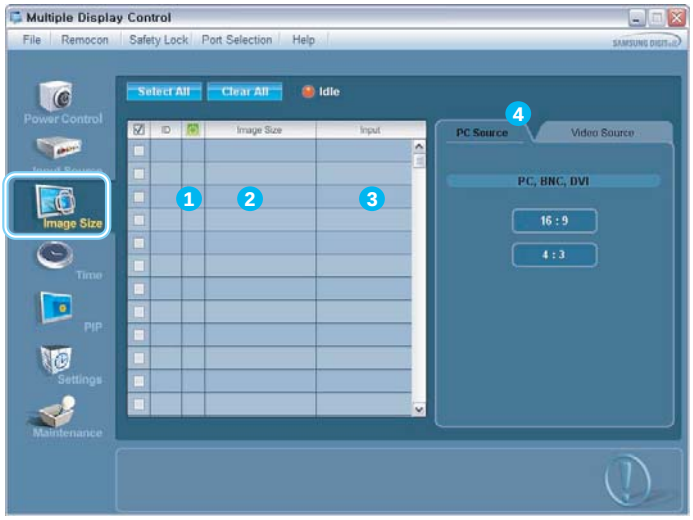
- Info Grid shows some basic information necessary to Image Size Control.

1) Power
   Shows the power status of the current display.
2) Image Size
   Shows the current Image Size of the display in use.
3) Input Source
   Shows the current Input Source of the display in use.
   Info Grid displays only the displays whose Input Source is PC, BNC, or DVI.
4) When you click Image Size, the PC, BNC, and DVI tabs first appear.
   This feature allows you to control Image Size for PC, BNC, or DV.

- Image Size Control is available only for the displays for whose power status is ON.

-Image Size Control - Video Source

1. Click Image Size of the main icons to display the Image Size window.



- Info Grid shows some basic information necessary to Image Size Control.

1) Click the Video Source tab to adjust the Image Size of AV, S-Video, TV, Component, or DVI(HDCP). Click Select All or use Check Box to select a display to control.

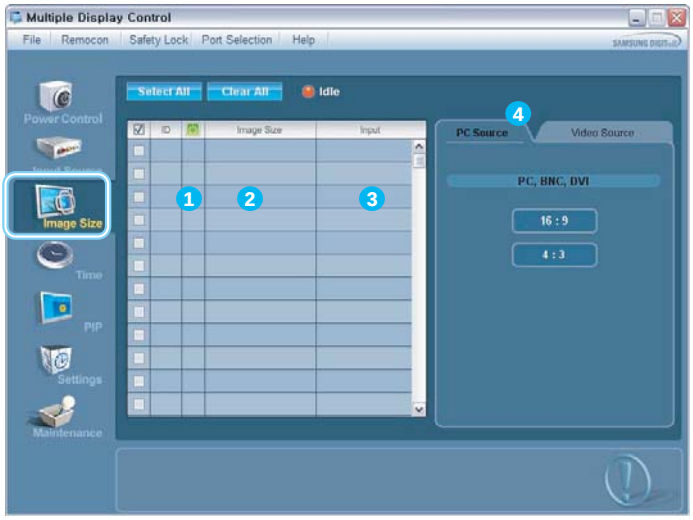
2) Info Grid displays only the display having AV, S-Video, TV, Component, or DVI(HDCP) as input source

3) Adjust the Image Size of the display.
If the input signal for the component or DVI(HDCP) is 720p or 1080, Zoom1 and Zoom are not available.

- **The Image Size Control feature is available only for the displays whose power status is ON.**

-Time Control

1. Click Time of the main icons to display the Time Control window.



- Info Grid shows some basic information necessary to Time Control.

1) Current Time
Set the current time for the selected display (PC Time).
Set the PC time before you change the current time.

2) On Time Setup
Set the hour, minute, AM/PM of On Time, Status, Source, and Volume of the selected display.

3) Off Time Setup
Set the hour, minute,, and AM/PM, and Status for Off Timer of the selected display.

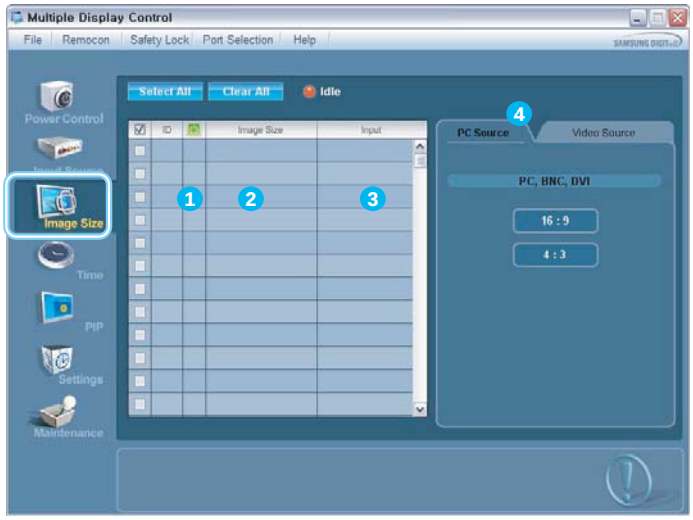
4) Shows the On Timer settings.

5) Shows the Off Timer settings.

- **Time Control is available only for the displays for whose the power status is ON.**

-PIP Control - PIP Size

1. Click PIP of the main icons to display the PIP control window.



- Info Grid shows some basic information necessary to PIP Size Control.

1) PIP Size
Shows the current PIP Size of the display in use.

2) OFF
Turns off the PIP of the selected display.

3) Large
Turns on the PIP of the selected display and changes the size to Large.

4) Small
Turns on the PIP of the selected display and changes the size to Small.

5) Double1
Turns on the PIP of the selected display and changes the size to Double 1.

6) Double2
Turns on the PIP of the selected display and changes the size to Double 2.

7) Double3
Turns on the PIP of the selected display and changes the size to Double 3.

- **PIP Control is available only for the displays whose power status is ON.**
- **The set with the input source Component is not displayed on Info Grid.**

-PIP Control - PIP Source

1. Click PIP of the main icons to display the PIP control window.

Some of the PIP Sources may not be available for selection depending on the input source type of the Main Screen.

The PIP control feature is available only for the displays whose power status is ON and the PIP function is set to ON.

- Info grid shows some basic information necessary to PIP Source Control.

1) PIP Source
Click the PIP Source tab to display the PIP Source list. PIP Source can be controlled only when the power of the monitor is turned on.

2) PC
Changes the PIP source of the selected display to PC.

3) BNC
Changes the PIP source of the selected display to BNC.

4) DVI
Changes the PIP source of the selected display to DVI.

5) TV
Changes the PIP source of the selected display to TV.

6) AV
Changes the PIP source of the selected display to AV.

7) S-Video
Changes the PIP source of the selected display to S-Video.

8) Component
Changes the PIP source of the selected display to Component.

- Setting Control - Picture

1. Click Settings of the main icons to display the Settings Control screen.

This feature is available only for the displays whose power status is ON and if no selection is made, the factory default is displayed.

- Info Grid shows some basic information necessary to Setting Control. When each function is selected, the set value of the selected function is displayed in the slide. As you select Select All, the value is returned to the default setting (50).
Changing a value in this screen will automatically change the mode to "CUSTOM."

1) Picture
Available only for TV, AV, S-Video, Component, and DVI(HDCP).

2) Contrast
Adjusts Contrast of the selected display.

3) Brightness
Adjusts Brightness of the selected display.

4) Sharpness
Adjusts Sharpness of the selected display.

5) Color
Adjusts Color of the selected display.

6) Tint
Adjusts Tint of the selected display.

7) Color Tone
Adjusts Color Tone of the selected display.

-Setting Control - Picture PC

1. Click Setting of the main icons and select the Picture PC tab to display the Setting Control window.

This feature is available only for the displays whose power status is ON and if no selection is made, the factory default is displayed.

- Info Grid shows some basic information necessary to Setting Control. When each function is selected, the set value of the selected function is displayed in the slide. As you select Select All, the value is returned to the default setting (50).
  Changing a value in this screen will automatically change the mode to "CUSTOM."

1) Picture PC
   Available only for PC, BNC, and DVI.
2) Contrast
   Adjusts Contrast of the selected display.
3) Brightness
   Adjusts Brightness of the selected display.
4) Red
   Adjusts Red Color of the selected display.
5) Green
   Adjusts Green Color of the selected display.
6) Blue
   Adjusts Blue Color of he selected display.

-Setting Control - Audio

1. Click Settings of the main icons and select the Audio tab to display the Setting Control window.

This feature is available only for the displays whose power status in IN and if no selection is made, the factory default is displayed.
The MagicNet Input operates only in MagicNet models.

- Info Grid shows some basic information necessary to Setting Control. When each function is selected, the set value of the selected function is displayed in the slide. As you select Select All, the value is returned to the default setting (50).
  Changing a value in this screen will automatically change the mode to "CUSTOM."

1) Audio
   Controls audio setting for all input sources.
2) Bass
   Adjusts Bass of the selected display.
3) Treble
   Adjusts Treble of the selected display.
4) Balance
   Adjusts Balance of the selected display.
5) SRS TSXT
   Turns the SRS Trusurround XT function of the selected display On/Off.
6) Sound Select
   Select either Main or Sub when the PIP of the selected display is turned On.

-Setting Control - Image Lock

1. Click Settings of the main icons and select the Image tab to display the Setting Control window.

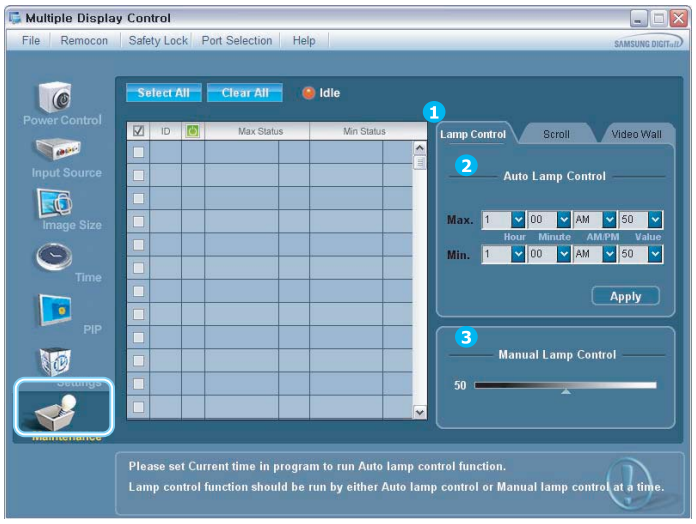
- Info Grid shows some basic information necessary to Image Lock.

1) Image Lock
   Available only the controls for PC and BNC.
2) Coarse
   Adjusts Coarse of the selected display.
3) Fine
   Adjusts Fine of the selected display.
4) Position
   Adjusts Position of the selected display.
5) Auto Adjustment
   Automatically adjusts the screen.

- **This feature is available only for the displays whose power status is ON.**

-Maintenance Control - Lamp Control

1. Click Maintenance of the main icons and select the Lamp Control tab to display the Maintenance Control window.



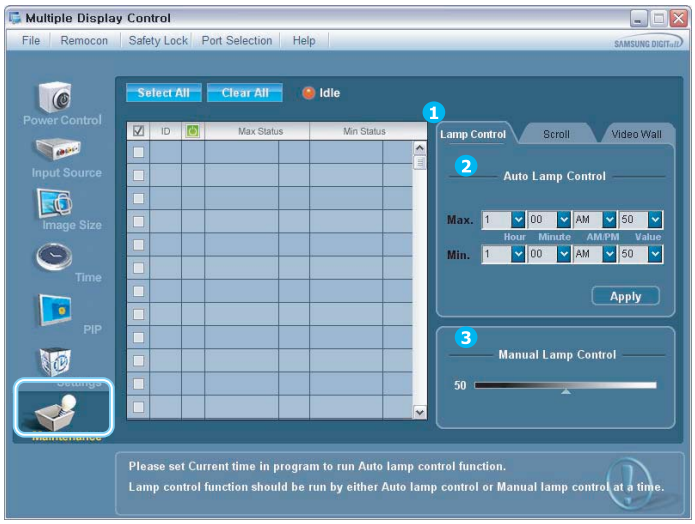
- Info Grid shows some basic information necessary to Maintenance Control.

1) Lamp control
   Adjusts the brightness of the lamp.
2) Auto Lamp Control
   Automatically adjusts the backlight of the selected display at a specified time. The Auto Lamp Control automatically turns off if you adjust using the Manual Lamp Control.
3) Manual Lamp Control
   Allows you to adjust the backlight of the selected display regardless of the time.
   The Manual Lamp Control automatically turns off if you adjust using the Manual Lamp Control.

- The Maintenance Control feature is available only for the displays whose Power Status is ON.

-Maintenance Control - Lamp Control

1. Click Maintenance of the main icons and select the Scroll tab to display the Maintenance Control.



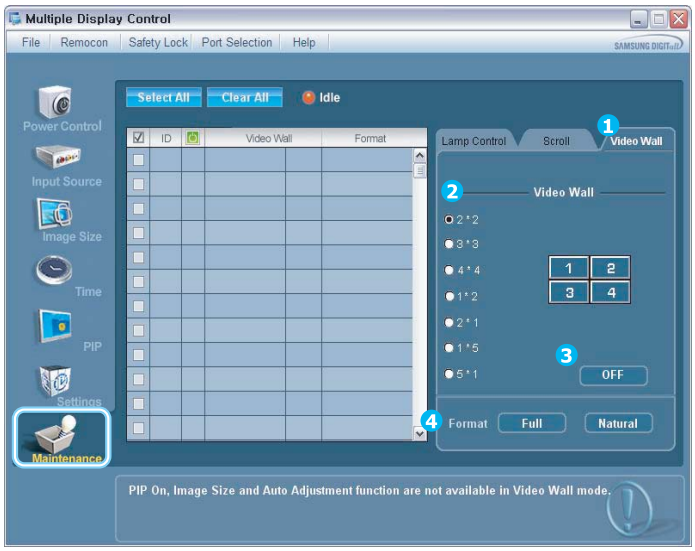
1) Screen Scroll

Eliminates the afterimages that can result when the still image is displayed for prolonged periods. Use Interval to set the repeat cycle by time unit and use Second to set the repeat cycle by second unit. Select one of 4 types- Scroll, Pixel, Bar, Eraser.

- The Maintenance Control feature is available only for the displays whose power status in ON.

-Maintenance Control - Video Wall

1. Click Maintenance of the main icons and select the Wall tab to display the Maintenance Control window.



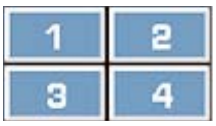
1) Video Wall

A Video Wall is a set of video screens that are connected together, so that each screen shows a part of the whole picture or so that the same picture is repeated on each screen.

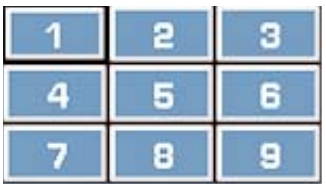
2) Video Wall (Screen Divider)

You can select a number of screens with a different layout when dividing.

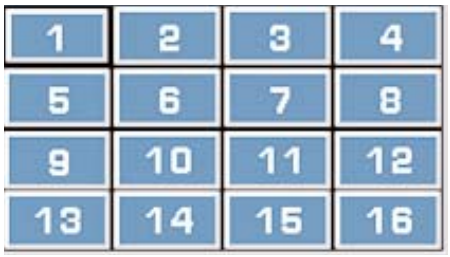
2 * 2



3 * 3



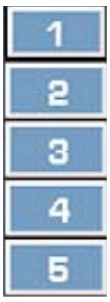
4 * 4



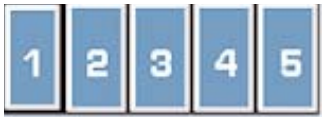
2 * 1

1 * 2

5 * 1



1 * 5

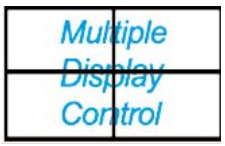


3) On / Off

Turns On or Off the Video Wall function of the selected display.

4) Format

The format can be selected to see a divided screen.



Full

Natural

This feature is available only for the displays whose power status in IN and if no selection is made, the factory default is displayed.

The Malignant Input operates only in MagicNet models.

-Troubleshooting

1. The display you wish to control does not appear on the Power Control Info Grid
   - Check the connection of RS232C. (Check if it is properly connected to the Com1 port)
   - Check the displays to see if any of the other displays connected have the same ID. If more than one displays have the same ID, those displays are not properly detected by the program due to data conflict.
   - Check if the Display Set ID is a number between 1 and 10. (Adjust using the Display menu)

note : A Display Set ID must be a value between 1 and 10.
If the value is out of the range, the MDC system cannot control the display.

2. The display you wish to control does not appear on the other Control Info Grids
   - Check to see if the display power is ON. (You can check this in Power Control Info Grid)
   - Check if you can change the input source of the display.

3. The dialogue box appears repeatedly.
   - Check to see if the display you wish to control is selected.

4. Both On Timer and Off Timer have been set but different time is showing.
   - Apply current time to synchronize the display clocks.

5. The remote may not function properly when you turn off the remote Function, disconnect the RS-232C cable, or exit the program in an Irregular manner. Rerun the program and turn the remote function again to Restore normal functions.

note : This program may malfunction due to problems in communication circuits or interference from electronic appliances nearby.

Settings Value Display In Multiple Display Mode

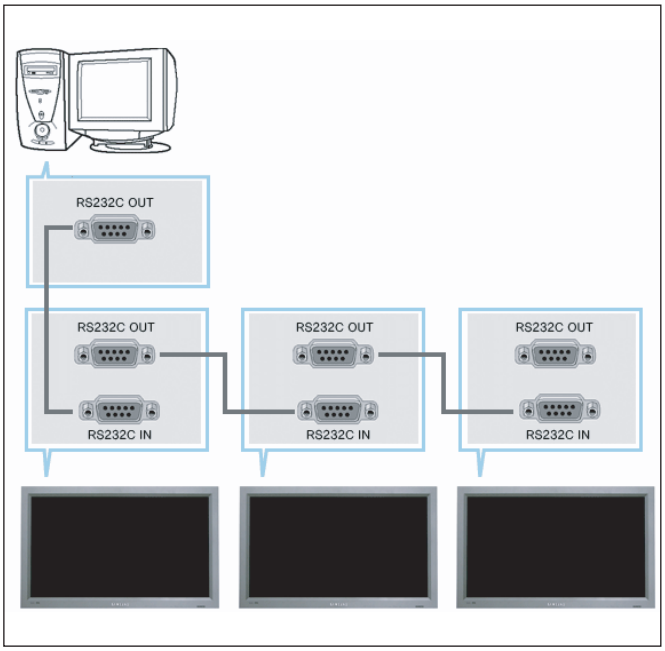
When there are more than one displays connected, the settings values are displayed as follows.
1. No selection: Displays the Factory Default Value.
2. Selected one display: Fetches and displays the settings value for the selected display.
3. Selected one display (ID1) and add another display (ID3): The program, which was displaying the settings value of ID 1, fetches and displays the value of ID3.
4. Selected all sets using Select All: Returns to the Factory Default Value.

3-7 Updating the program - MAIN

-. How to connect

1.Connect the serial port of the PC and the input serial port of Beethoven Board with the RS232C cable.

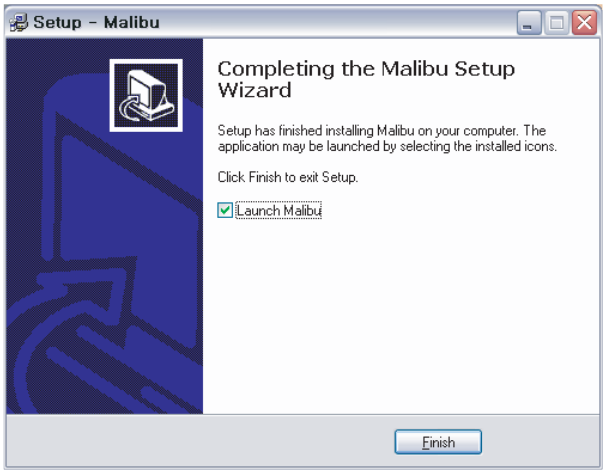
2. Option in the Factory Menu : Check if BaudRate is set to 115200.



RS-232C, a standard of serial communication, is used for the communication between a PC and a display. Therefore, a serial cable should be connected between the serial port on a PC and the serial port on a display.
Refer to the diagram.

Run the .exe file and press the ¡°OK¡± button, then press ¡°Next¡± to complete the installation. (Attached)
Malibu Flash Downloader 1.7 File

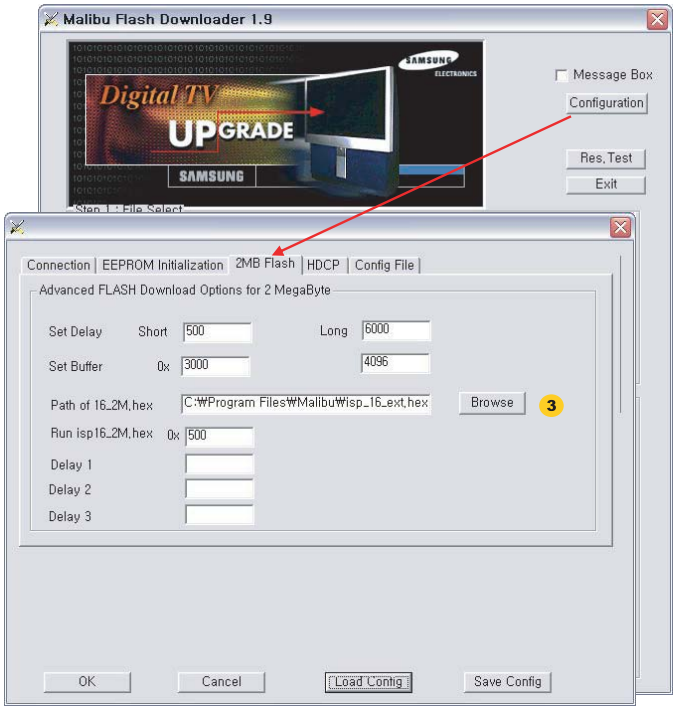
Setup - Malibu
Welcome to the Malibu Setup Wizard
This will install Malibu v1.8 on your computer.
It is recommended that you close all other applications before continuing.
Click Next to continue, or Cancel to exit Setup.
Next >
Cancel


Setup - Malibu
Completing the Malibu Setup Wizard
Setup has finished installing Malibu on your computer. The application may be launched by selecting the installed icons.
Click Finish to exit Setup.
Launch Malibu
Finish

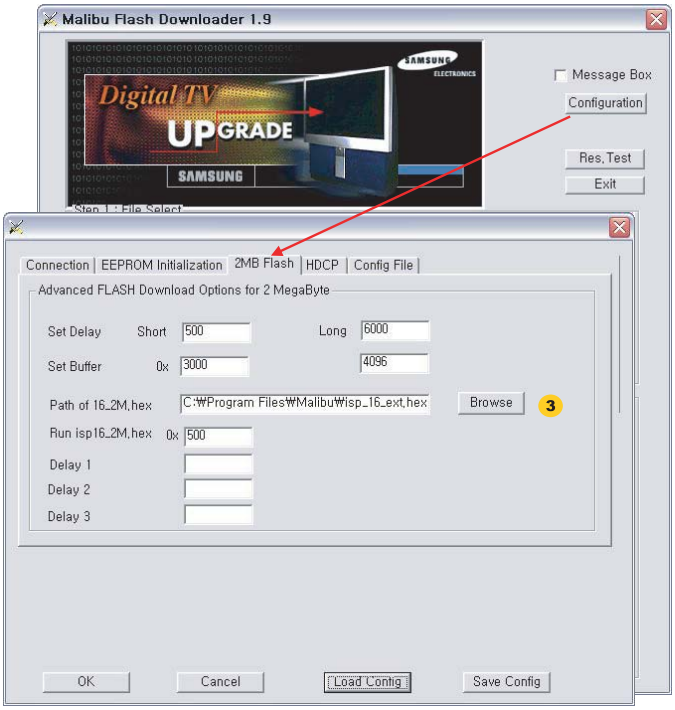
The program is not affected by Windows OS system.
When the installation is complete using the Setup.exe file

, the icon appears on your desktop.
Double click the icon to run the program.

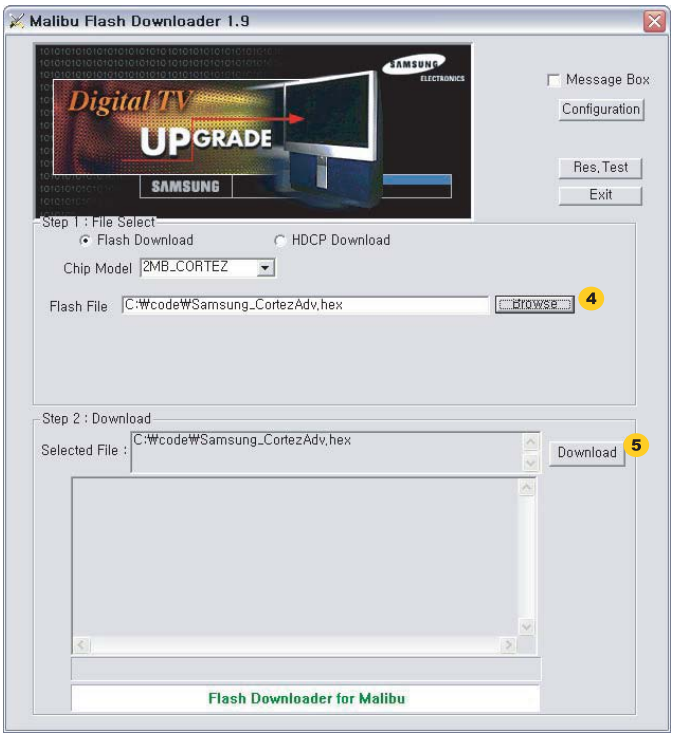
1. Flash Download in the File Select menu
   Set as the figure.
   Chip Model : Set 2MB_CORTEZ first.



2. After the installation
   Connection
   >Set as the figure
   SERIAL1
   COM1
   115200



3. 2MB Flash
   Isp_16_ext. Hex
   Click Load Config for the auto setting.



4. Select the file you want to download on Browse.

5. Press 5 to download.
   Turn the power of the board off/on when the download success message appears.

   Check the Checksum and date to see if the right code is applied in the Factory mode.

3-8 Network Board: BIOS Replacement

BIOS Replacement

You may replace the BIOS in the same or similar cases as followings:

-.EX1) Picture is normal but the remote control or function key does not work.

-.EX2) The SAMSUNG Logo appears but cannot perform the next step.

-.EX3) Upgrading for the Software problem is in need because the problem was found after the mass production.

1107-001288
(SST49LF004B)
The Programmed BIOS

Disassemble the set as the picture (refer to the Set disassembly diagram) and remove the current BIOS from CN2300 Socket, then insert the new BIOS.

¢ºFor removing, use the the supplied JIG or a sharp object like a tweezers to insert and pull back to the groove one after the other. (Note that there can be a malfunction in the monitor if the Socket is damaged.)

¢ºConsider the direction of the IC Pin 1 when you insert and fully insert with moderate force.

3-8-1 Network Board: FDM Replacement

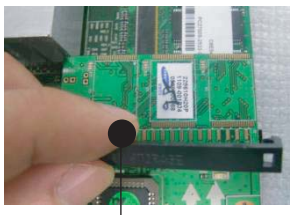
FDM Replacement

You may replace the FDM in the same or similar cases as followings:

-.EX1) Picture is normal but the remote control or function key does not work.

-.EX2) The SAMSUNG Logo appears but cannot perform the next step.

-.EX3) Upgrading for the Software problem is in need because the problem was found after the mass production.



CN2000_FDM (DM221210H20P)
1109-001341
The programmed FDM

Disassemble the set as the picture (refer to the set disassembly diagram) and remove the current FDM from CN2000 and insert the new FDM.

¢ºUse the supplied JIG or a sharp object like a tweezers to remove the FDM Holder at the corner grooves of both sides. (Note that there can be a malfunction in the monitor if the Socket is damaged.)

¢ºHold both sides and remove the FDM.

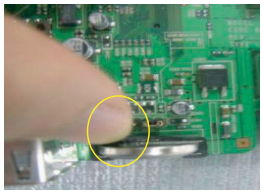
¢ºReplace with the new FDM and assemble the set.

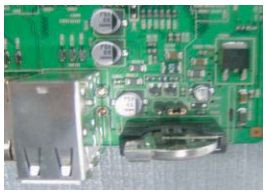
3-8-2 Network Board: Battery Replacement

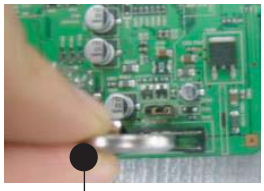
Battery Replacement

You may replace the battery in the same or similar cases as followings:

-.EX1) The required information is not properly stored when the FDM and BIOS are updated.







Battery (4301-000108)

Disassemble as the picture (refer to the Set disassembly diagram) and remove the current battery from BAT2400, then insert the new battery.

¢º Pull back the holder on the left of the battery
¢º Hold both sides and remove the battery
¢º Replace with the new battery

3-8-3 Must Dos after change the Board

- Main Board

Check the adjusted PC color status

DDC Input (Input both Analog and Digital)

Reset after entering the Service mode and turn off the Hard power.

- Network Board

Press ¢ºII + 1 + 8 + 2 + Enter and check the version of Network.

Check the versions of FDM and BIOS and see if they are the same as the version of the server program.

If the version is different, refer to the descriptions above and upgrade the program

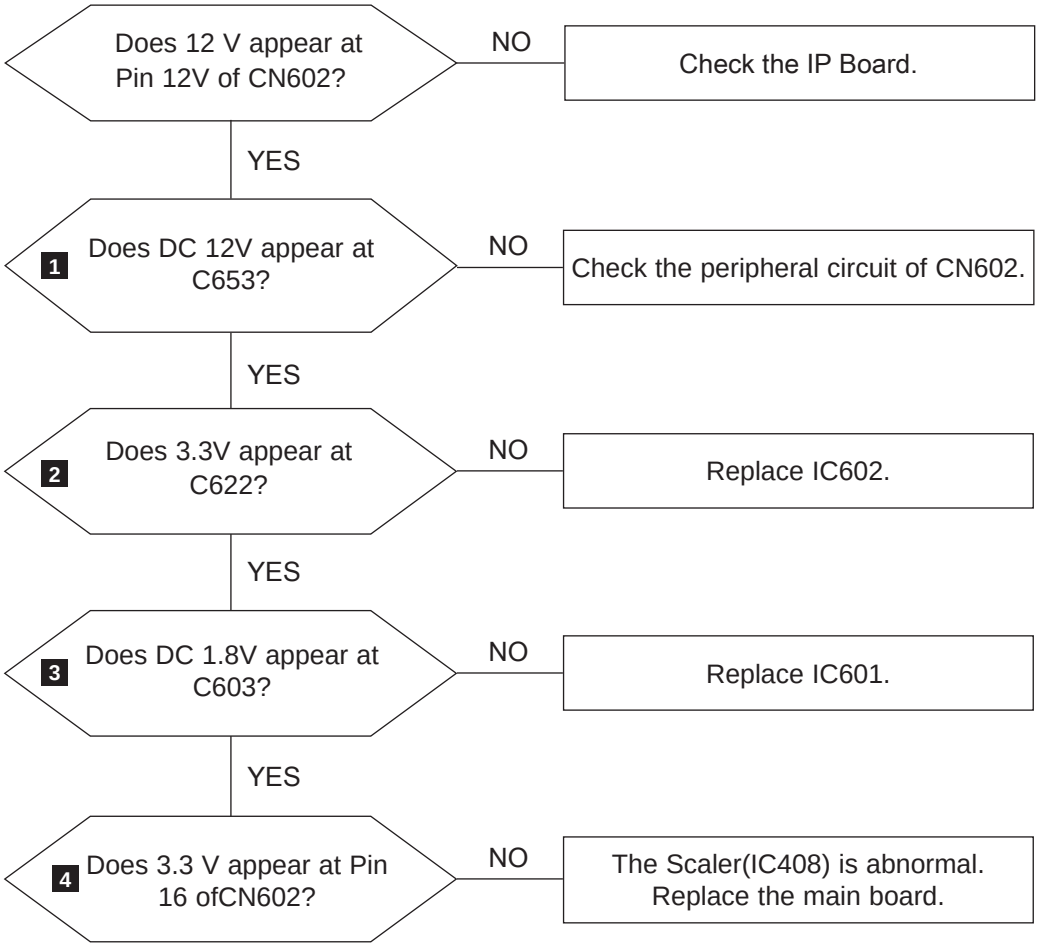
Upgrade the program and turn the power off/on.

Check if there are SODIMM memory, Battery, and Jumper.

Memo

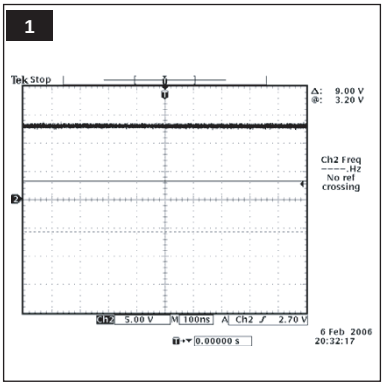
4 Troubleshooting

4-1 No Power

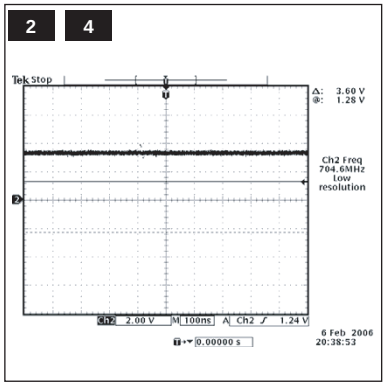


WAVEFORMS

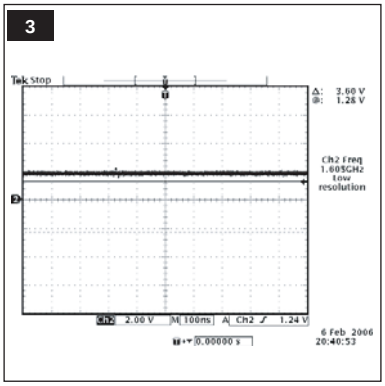
1

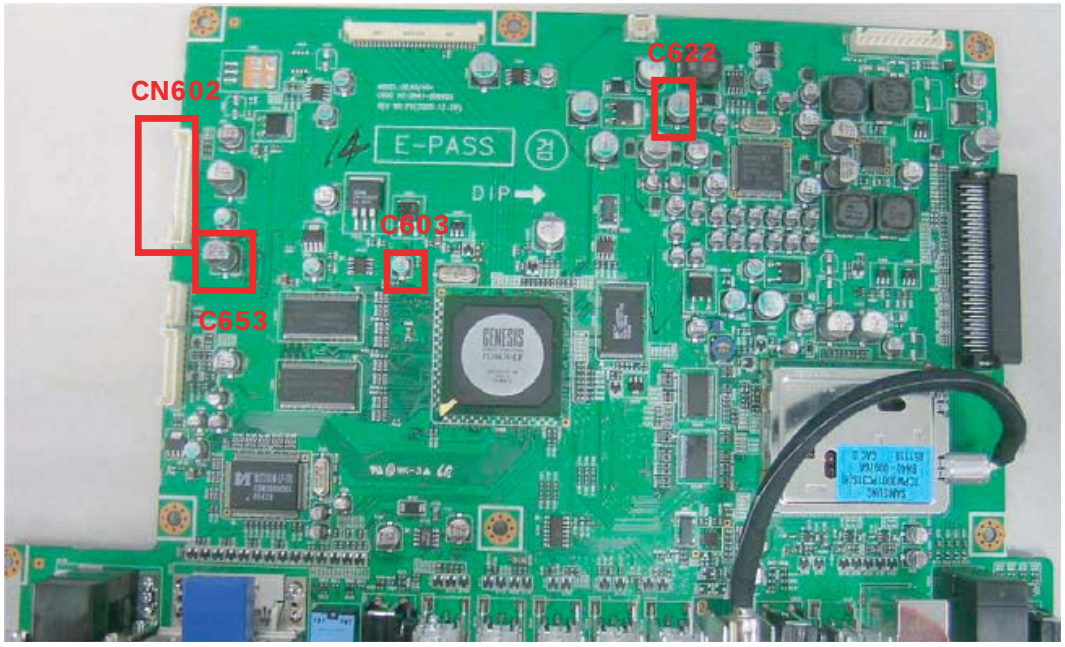


2 **4**

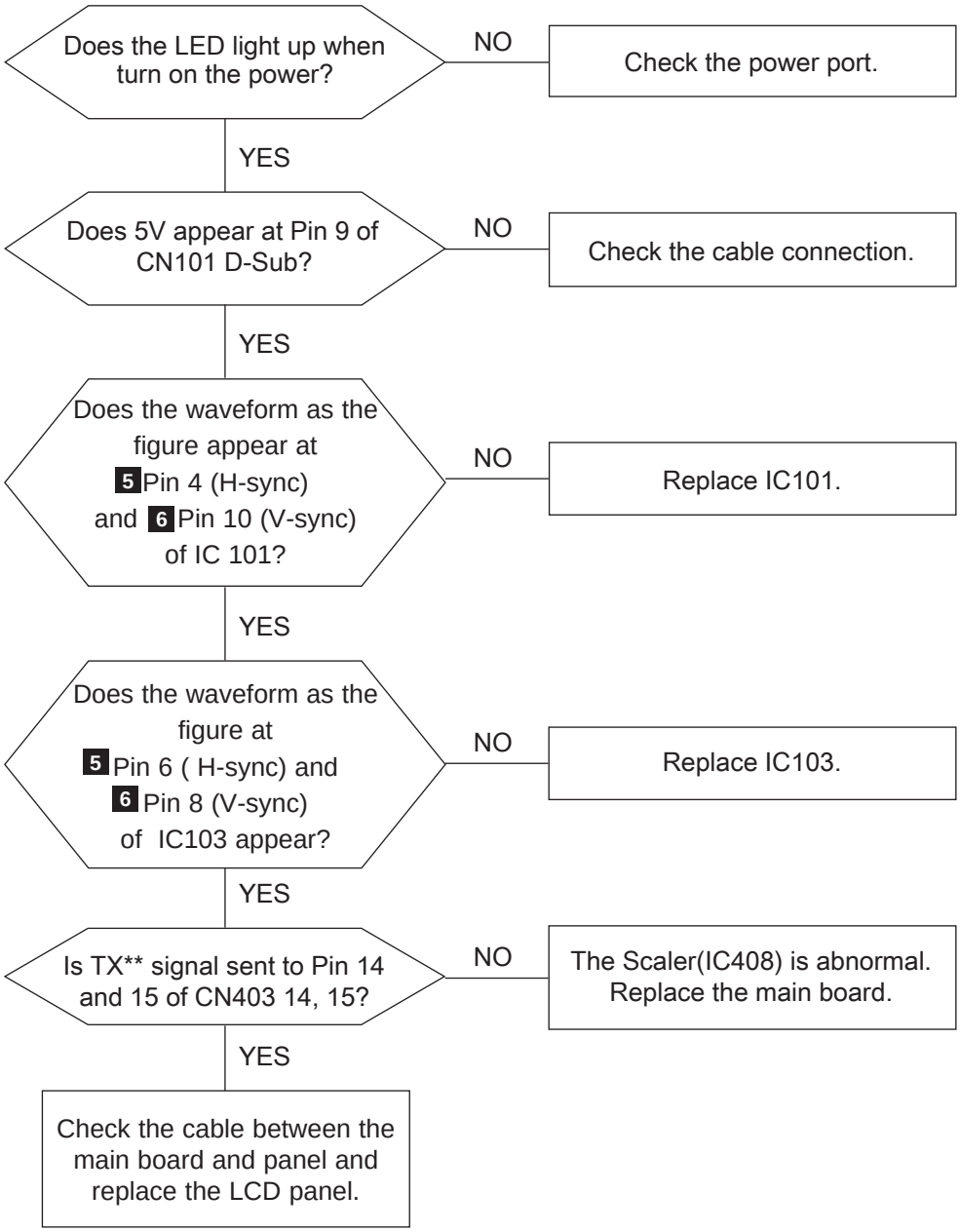


3



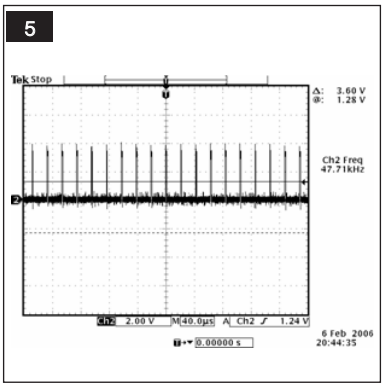


4-2 No PC(D-SUB) Video

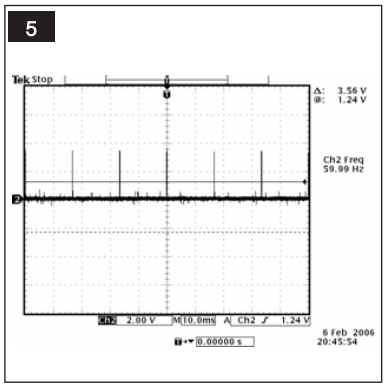

Does the LED light up when turn on the power?
NO
Check the power port.
YES
Does 5V appear at Pin 9 of CN101 D-Sub?
NO
Check the cable connection.
YES
Does the waveform as the figure appear at 5 Pin 4 (H-sync) and 6 Pin 10 (V-sync) of IC 101?
NO
Replace IC101.
YES
Does the waveform as the figure at 5 Pin 6 (H-sync) and 6 Pin 8 (V-sync) of IC103 appear?
NO
Replace IC103.
YES
Is TX** signal sent to Pin 14 and 15 of CN403 14, 15?
NO
The Scaler(IC408) is abnormal. Replace the main board.
YES
Check the cable between the main board and panel and replace the LCD panel.

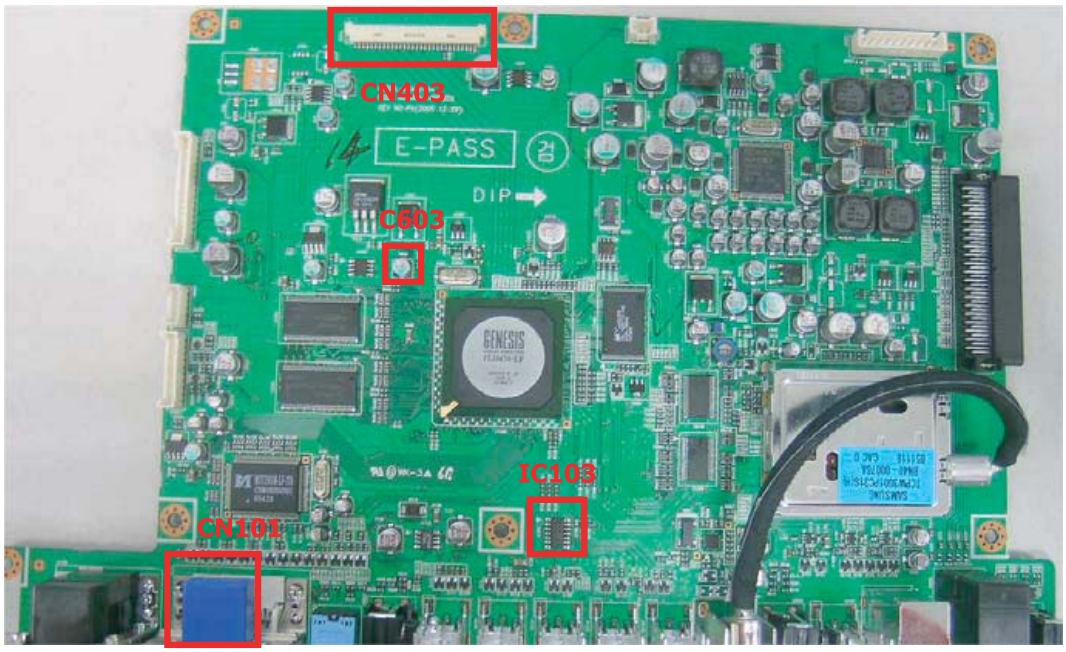
WAVEFORMS

5



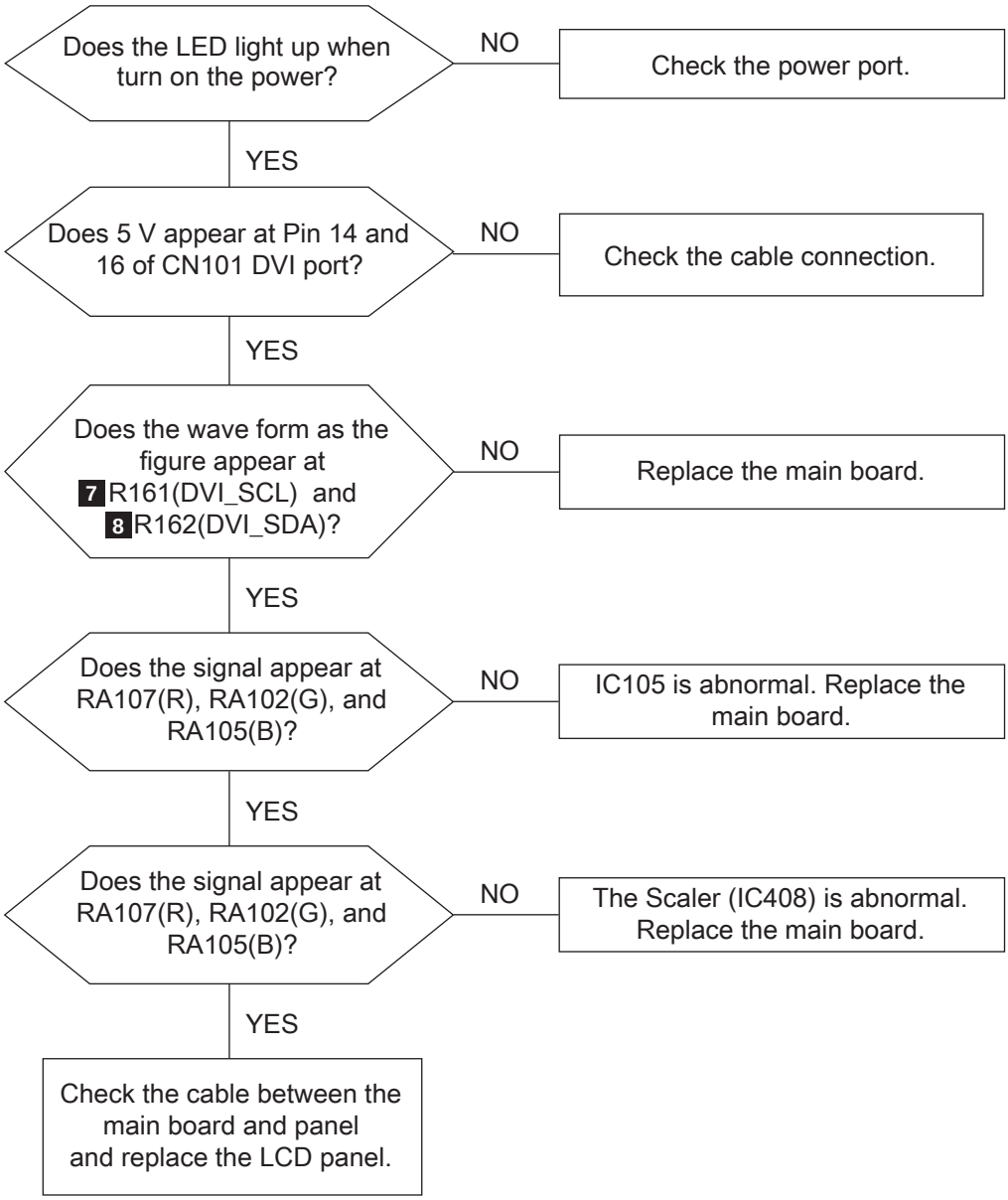
5





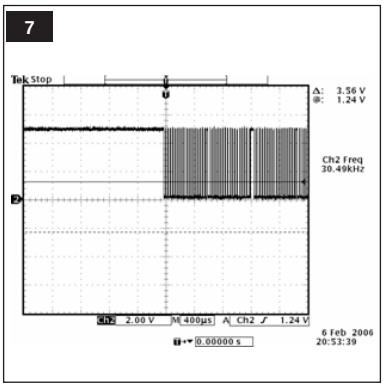
IC101 is on the rear board of IC103.

4-3 No DVI Video

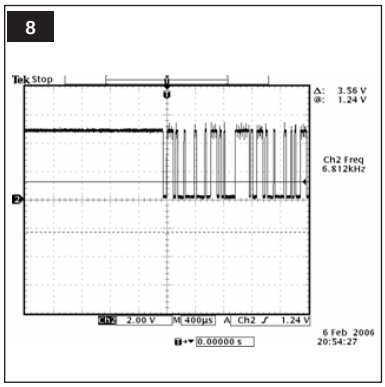

Does the LED light up when turn on the power?
NO
Check the power port.
YES
Does 5 V appear at Pin 14 and 16 of CN101 DVI port?
NO
Check the cable connection.
YES
Does the wave form as the figure appear at 7 R161(DVI_SCL) and 8 R162(DVI_SDA)?
NO
Replace the main board.
YES
Does the signal appear at RA107(R), RA102(G), and RA105(B)?
NO
IC105 is abnormal. Replace the main board.
YES
Does the signal appear at RA107(R), RA102(G), and RA105(B)?
NO
The Scaler (IC408) is abnormal. Replace the main board.
YES
Check the cable between the main board and panel and replace the LCD panel.

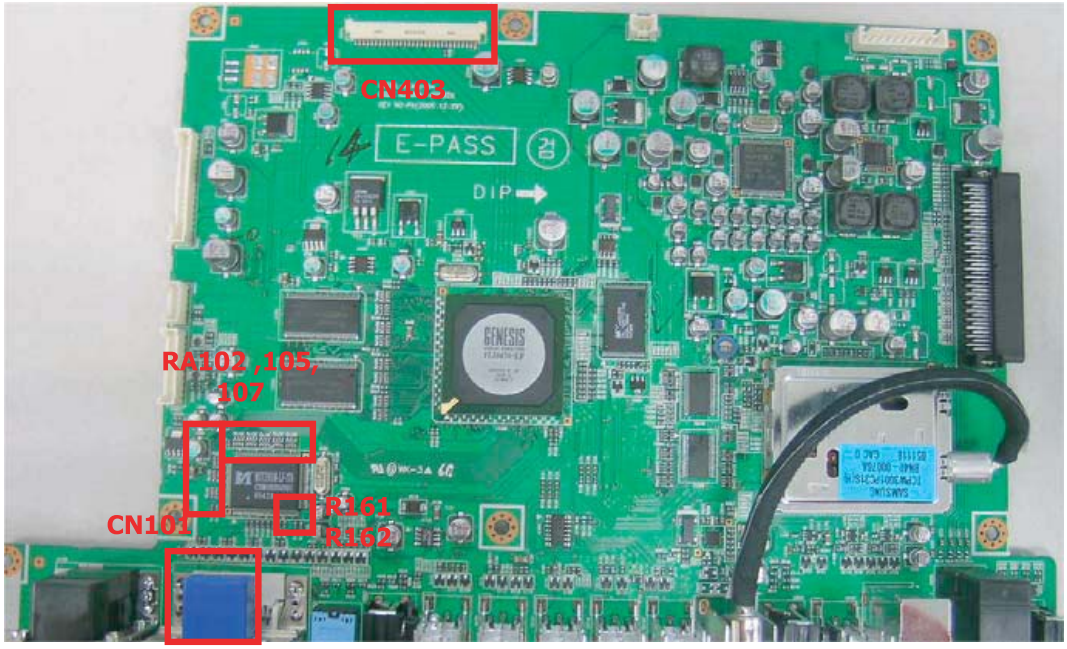
WAVEFORMS

7



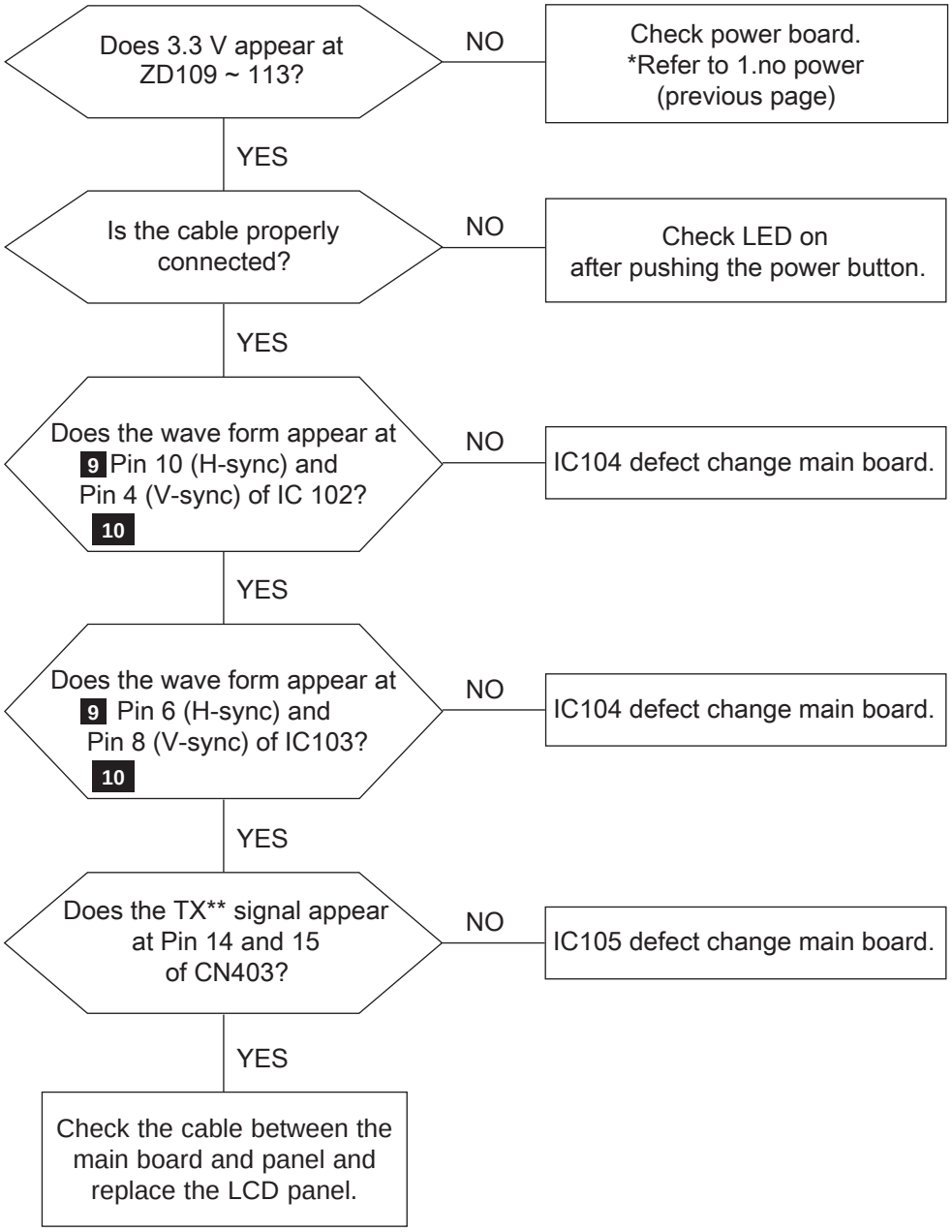
8





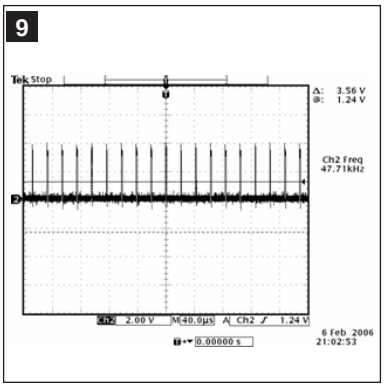
IC101 is on the rear board of IC103.

4-4 No BNC Video

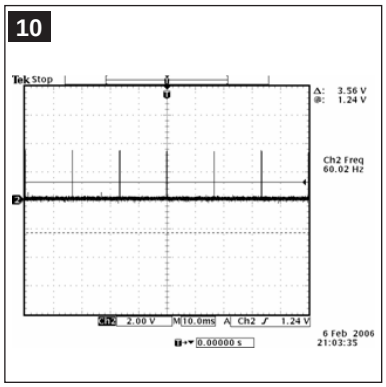

Does 3.3 V appear at ZD109 ~ 113?
NO
Check power board. *Refer to 1.no power (previous page)
YES
Is the cable properly connected?
NO
Check LED on after pushing the power button.
YES
Does the wave form appear at 9 Pin 10 (H-sync) and Pin 4 (V-sync) of IC 102? 10
NO
IC104 defect change main board.
YES
Does the wave form appear at 9 Pin 6 (H-sync) and Pin 8 (V-sync) of IC103? 10
NO
IC104 defect change main board.
YES
Does the TX** signal appear at Pin 14 and 15 of CN403?
NO
IC105 defect change main board.
YES
Check the cable between the main board and panel and replace the LCD panel.

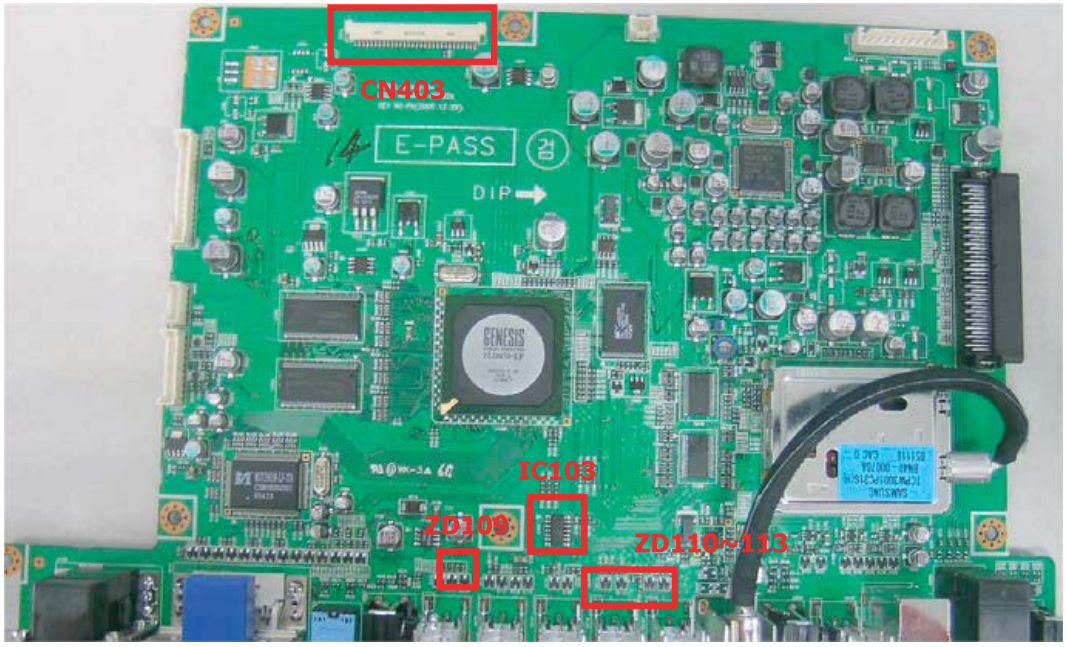
WAVEFORMS

9



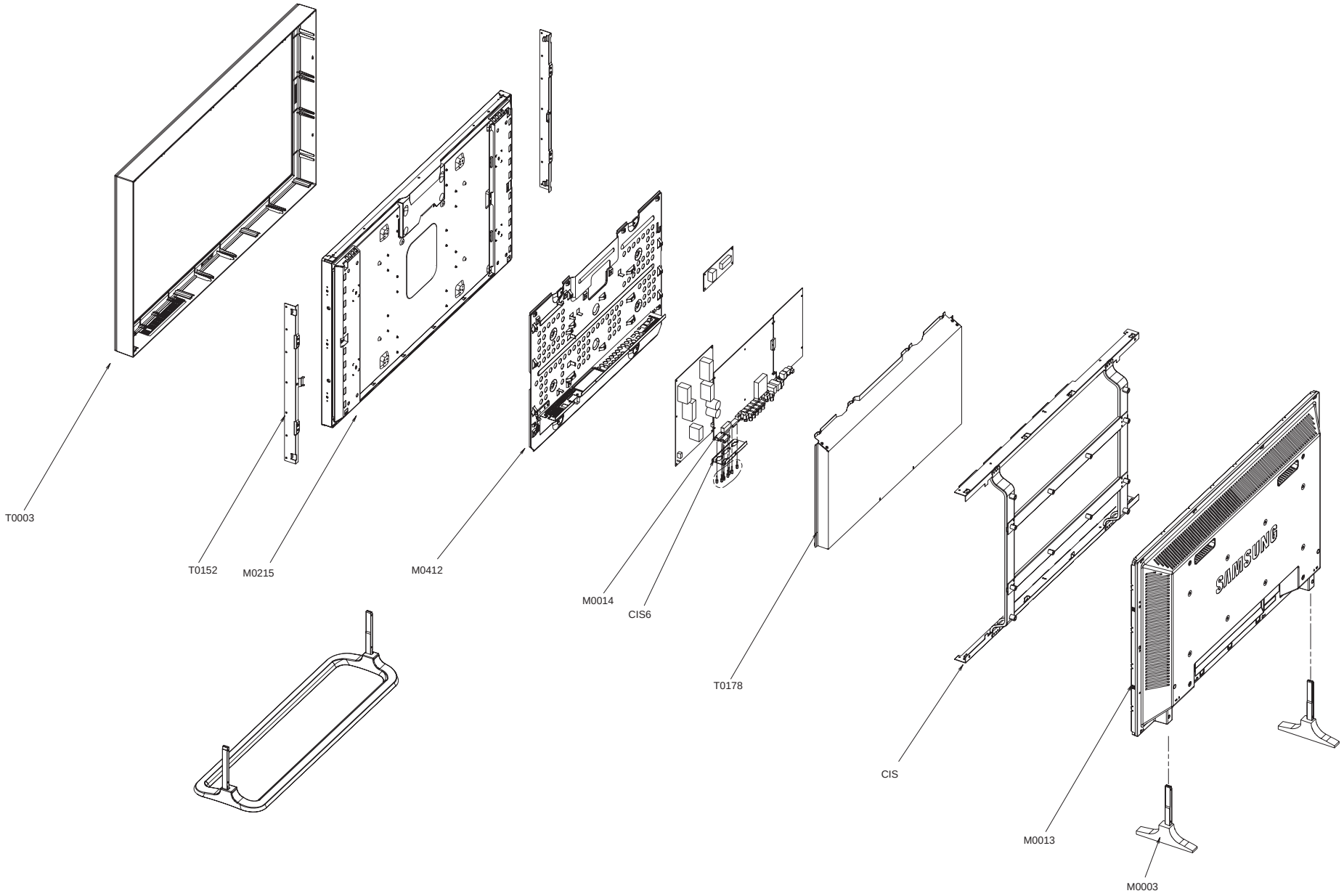
10





5 Exploded View & Parts List

5-1 Exploded View



5-2 Parts List

Location.No	CODE-NO	SPECIFICATION & DESCRIPTION	Q'TY	S.A/SNA
T0003	BN96-01779T	ASSY COVER P-FRONT;LS40BH(S/M PX),HIPS H	1	S.A
M0215	BN07-00264A	LCD-PANEL;LTA400WT-L01,8bit,952*551*51.0	1	S.A
T0152	BN96-01792C	ASSY BRACKET P-VESA;BE40PS,SECC,T1.6	1	S.N.A
M0412	BN96-01782G	ASSY BRACKET P-PCB;LS40BHT,SECC,T1.0	1	S.N.A
M0014	BN94-00919C	ASSY PCB MAIN-SPZ;LS40BHPNB/XAA	1	S.A
CIS6	BN63-01710B	SHIELD-JACK;BE46PS,SPTE,0.5,CHANGE CORE	1	S.N.A
T0178	BN63-01735B	SHIELD-PCB;BEETHOVEN40",SECC,0.8,CHANGE	1	S.N.A
M0013	BN96-01780H	ASSY COVER P-REAR;LS40BH,beethoven2,ABS+	1	S.A
M0003	BN96-00452E	ASSY STAND P;BE46PS,AL DIECASTING,BKN-S2	1	S.A

6 Electrical Parts List

-You can search for updated part codes through ITSELF web site.
URL : http://itself.sec.samsung.co.kr/

6-1 Parts List

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
		LS40BHPNB/XSF	400PX,WXM1/S40A2-LBH,40,LCD-MO,CHINA		
0.1	M0001	BN90-00903C	ASSY COVER FRONT;LS40BHPNB/XAA,400PX	1	S.N.A
..2	M0081	6003-001026	SCREW-TAPTITE;RH,+,B,M4,L15,ZPC(BLK),SWR	8	S.A
..2	T0003	BN96-01779T	ASSY COVER P-FRONT;LS40BH(S/M PX),HIPS H	1	S.A
...3	M0081	6003-000282	SCREW-TAPTITE;BH,+,-,B,M3,L8,ZPC(BLK),SW	4	S.N.A
...3	T0081	BN61-00408A	GUIDE-FUNCTION;CK40PS,ABS,GR503,HB	1	S.N.A
...3	M0112	BN63-01737C	COVER-FRONT;BEETHOVEN 40",HIPS,T3.2,HB,B	1	S.N.A
...3	M0007	BN64-00156D	KNOB-FUNCTION;BE46PS,ABS,HB,BK07	1	S.N.A
...3	T0299	BN64-00352A	WINDOW-RMC LED;BEETHOVEN 46,PC,ACRAY,BKM	1	S.N.A
...3	M0020	BN96-03565A	ASSY BOARD P;BEETHOVEN 2,FUNCTION & IR	1	S.A
...3		AA64-04419A	LOGO-BADGE;Z50,AL,1.3,3g,70mm,SILVER,SAM	1	S.N.A
0.1	M0002	BN90-00904B	ASSY COVER REAR;LS40BHPNB/XAA	1	S.N.A
..2	M0013	BN96-01780H	ASSY COVER P-REAR;LS40BH,beethoven2,ABS+	1	S.A
...3	M0081	6003-001026	SCREW-TAPTITE;RH,+,B,M4,L15,ZPC(BLK),SWR	12	S.A
...3	T0920	BN61-01572A	GUIDE-STAND;BEETHOVEN 40",PPS	1	S.N.A
...3	M0114	BN61-01630A	HOLDER-WIRE;BE46PS,STS,T2.0	3	S.N.A
...3	T0531	BN63-00856A	COVER-BOTTOM;CK40PS,ABS HB,GR503	2	S.A
...3		BN63-00930C	COVER HANDLE;LS40BH,ABS,T3.5,HB,BK07	2	S.N.A
...3	M0006	BN63-01736B	COVER-REAR;BEETHOVEN,ABS+PC 5V,GR37	1	S.N.A
...3	T0578	BN64-00356F	INLAY AV;BEETHOVEN2,PS,0.5	1	S.N.A
0.1	M0017	BN91-01013E	ASSY CHASSIS-SPZ;LS40BHPNB/XAA	1	S.N.A
..2	M0014	BN94-00919C	ASSY PCB MAIN-SPZ;LS40BHPNB/XAA	1	S.A
...3	T0245	0202-001492	SOLDER-WIRE FLUX;HSE-02 LFM48 SR-34 S,-,	0.25	S.N.A
...3	CN109	3701-001312	CONNECTOR-DSUB;9P/2C,2R,MALE,ANGLE,AUF	1	S.A
...3	CN101	3701-001334	CONNECTOR-DVI;24P(DVI)+15P(D-SUB),6,FEMA	1	S.A
...3	CN906	3705-001360	CONNECTOR-COAXIAL;BNC,FEMALE,-,75ohm,-	1	S.A
...3	CN906	3705-001360	CONNECTOR-COAXIAL;BNC,FEMALE,-,75ohm,-	1	S.A
...3	CN906	3705-001360	CONNECTOR-COAXIAL;BNC,FEMALE,-,75ohm,-	1	S.A
...3	CN906	3705-001360	CONNECTOR-COAXIAL;BNC,FEMALE,-,75ohm,-	1	S.A
...3	CN906	3705-001360	CONNECTOR-COAXIAL;BNC,FEMALE,-,75ohm,-	1	S.A
...3	CN906	3705-001360	CONNECTOR-COAXIAL;BNC,FEMALE,-,75ohm,-	1	S.A
...3	CN906	3711-004182	CONNECTOR-HEADER;BOX,10P,1R,2MM,STRAIGHT	1	S.A
...3	CN330	3711-004349	HEADER-BOARD TO CABLE;BOX,3P,1R,2mm,STRA	1	S.A
...3	CN330	3711-004484	HEADER-BOARD TO CABLE;BOX,5P,1R,2mm,STRA	1	S.A
...3	CN403	3711-005884	HEADER-BOARD TO BOARD;BOX,30P,2R,2mm,ANG	1	S.A
...3	CN330	3711-005942	HEADER-BOARD TO CABLE;BOX,16P,1R,2mm,STR	1	S.A
...3	CN110	3722-002000	JACK-DIN;4P/2C,NI,BLK,ANGLE	1	S.A
...3	CN502	3722-002081	JACK-EAR PHONE;5P/2C,-,SnPb,L-BLU,-	1	S.A
...3	JA333	3722-002285	JACK-PIN;2P,NI,WHT/RED,ANGLE	1	S.A
...3	JA333	3722-002285	JACK-PIN;2P,NI,WHT/RED,ANGLE	1	S.A
...3	JA333	3722-002285	JACK-PIN;2P,NI,WHT/RED,ANGLE	1	S.A
...3	CN506	BN37-00004A	CONN TERMINAL;PST038-01,BE32PXn,27.5 mm,	1	S.A
...3	T0174	BN97-00894C	ASSY SMD;LS40BHPNB/XAA	1	S.N.A
....4	CIS5	0202-001477	SOLDER-CREAM;LST309-M,-,D20~45§-,96.5Sn/	3.862	S.N.A
....4	D101	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D102	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D103	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D104	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D105	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D106	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	D107	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D108	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D109	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D110	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D111	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D113	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D114	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D115	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D116	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D117	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D118	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D119	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D120	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D122	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D123	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D124	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D125	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D126	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D127	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D128	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D129	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D130	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D131	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D132	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D133	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A
....4	D112	0402-000553	DIODE-SCHOTTKY;SS24/B240,40V,2000mA,DO-2	1	S.A
....4	D603	0402-000553	DIODE-SCHOTTKY;SS24/B240,40V,2000mA,DO-2	1	S.A
....4	ZD601	0402-000553	DIODE-SCHOTTKY;SS24/B240,40V,2000mA,DO-2	1	S.A
....4	ZD602	0402-000553	DIODE-SCHOTTKY;SS24/B240,40V,2000mA,DO-2	1	S.A
....4	D516	0402-001614	DIODE-RECTIFIER;S1G,400V,1A,DO-214AC,TP	1	S.A
....4	D513	0403-000258	DIODE-ZENER;BZX84C5V6,5.2-6V,225mW,SOT-2	1	S.A
....4	D514	0403-000258	DIODE-ZENER;BZX84C5V6,5.2-6V,225mW,SOT-2	1	S.A
....4	ZD403	0403-000277	DIODE-ZENER;MMBZ5226B,3.14-3.47V,225MW,S	1	S.A
....4	ZD404	0403-000277	DIODE-ZENER;MMBZ5226B,3.14-3.47V,225MW,S	1	S.A
....4	ZD101	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A
....4	ZD103	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A
....4	ZD104	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A
....4	ZD105	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A
....4	ZD107	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A
....4	ZD108	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A
....4	ZD109	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A
....4	ZD119	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A
....4	ZD124	0403-000579	DIODE-ZENER;BZX84C5V1,4.8-5.4V,200mW,SOT	1	S.A
....4	ZD110	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	ZD111	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	ZD112	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	ZD113	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	ZD115	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	ZD116	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	ZD117	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	ZD118	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	ZD120	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	ZD121	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	ZD122	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	ZD123	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A
....4	ZD102	0403-001435	DIODE-ZENER;QZX363C5V6,5.32-5.88V,200MW,	1	S.A
....4	ZD106	0403-001435	DIODE-ZENER;QZX363C5V6,5.32-5.88V,200MW,	1	S.A
....4	ZD401	0403-001435	DIODE-ZENER;QZX363C5V6,5.32-5.88V,200MW,	1	S.A
....4	ZD402	0403-001435	DIODE-ZENER;QZX363C5V6,5.32-5.88V,200MW,	1	S.A
....4	D501	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,-,SMD	1	S.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	D502	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,-,SMD	1	S.A
....4	D503	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,-,SMD	1	S.A
....4	D504	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,-,SMD	1	S.A
....4	D505	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,-,SMD	1	S.A
....4	D506	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,-,SMD	1	S.A
....4	D507	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,-,SMD	1	S.A
....4	D508	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,-,SMD	1	S.A
....4	D509	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,-,SMD	1	S.A
....4	D510	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,-,SMD	1	S.A
....4	D511	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,-,SMD	1	S.A
....4	D512	0406-001163	DIODE-TVS;CDS3C05GTA,6.4V/-/-,-,SMD	1	S.A
....4	D515	0407-000123	DIODE-ARRAY;DAN202K,80V,100mA,CA2-3,SOT-	1	S.A
....4	Q501	0501-000342	TR-SMALL SIGNAL;KSC1623-Y,NPN,200mW,SOT-	1	S.A
....4	Q102	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q103	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q401	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q502	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q503	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q504	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q505	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q506	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q603	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q604	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q605	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q606	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q607	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A
....4	Q409	0505-000275	FET-SILICON;SI4435DY,P,-30V,+-8.0A,0.014	1	S.A
....4	Q409	0505-001170	FET-SILICON;SI9933ADY-T1,P,-20V,3.4A,0.0	1	S.A
....4	IC104	0801-002171	IC-CMOS LOGIC;74LCX125,BUS BUFFER,SOP,14	1	S.A
....4	IC104	0801-002267	IC-CMOS LOGIC;74LCX14,-,SOIC,14P,150MIL,	1	S.A
....4	IC104	0801-002267	IC-CMOS LOGIC;74LCX14,-,SOIC,14P,150MIL,	1	S.A
....4	IC105	0909-001032	IC-REAL TIME CLOCK;PCF8563,SOP,8P,4.9x3.	1	S.A
....4	IC501	1001-000164	IC-ANALOG MULTIPLEX;74HC4052,CMOS,SOP,16	1	S.A
....4	IC110	1006-001076	IC-DRIVER/RECEIVER;MAX232ECWE+T,SOP,16P,	1	S.A
....4	IC112	1103-000129	IC-EEPROM;24C02,2Kbit,256x8Bit,SOP,8P,5x	1	S.A
....4	IC112	1103-000129	IC-EEPROM;24C02,2Kbit,256x8Bit,SOP,8P,5x	1	S.A
....4	IC112	1103-001195	IC-EEPROM;24C64,64Kbit,8Kx8Bit,SOP,-,5x4	1	S.A
....4	IC113	1105-001712	IC-DRAM;HYB25D256163CE,DDR,256Mbit,16Mx1	1	S.A
....4	IC113	1105-001712	IC-DRAM;HYB25D256163CE,DDR,256Mbit,16Mx1	1	S.A
....4	T0085	1201-002119	IC-AUDIO AMP;TPA3004D2,HTQFP,48P,7x7mm,-	1	S.A
....4	DU410	1201-002333	IC-OP AMP;EL5167,SOT-23,TP,5P,2.9x1.6mm,	1	S.A
....4	DU410	1201-002333	IC-OP AMP;EL5167,SOT-23,TP,5P,2.9x1.6mm,	1	S.A
....4	DU410	1201-002333	IC-OP AMP;EL5167,SOT-23,TP,5P,2.9x1.6mm,	1	S.A
....4	DU410	1201-002333	IC-OP AMP;EL5167,SOT-23,TP,5P,2.9x1.6mm,	1	S.A
....4	DU410	1201-002333	IC-OP AMP;EL5167,SOT-23,TP,5P,2.9x1.6mm,	1	S.A
....4	DU410	1201-002333	IC-OP AMP;EL5167,SOT-23,TP,5P,2.9x1.6mm,	1	S.A
....4	IC404	1203-001109	IC-VOL. DETECTOR;7045,SOT-89,3P,-,PLASTI	1	S.A
....4	IC407	1203-001109	IC-VOL. DETECTOR;7045,SOT-89,3P,-,PLASTI	1	S.A
....4	IC507	1203-001109	IC-VOL. DETECTOR;7045,SOT-89,3P,-,PLASTI	1	S.A
....4	T0087	1203-001293	IC-POSI.FIXED REG.;033,T0-252,3P,6.5MIL,	1	S.A
....4	T0087	1203-001816	IC-POSI.FIXED REG.;78M08,TO-252,3P,-,PLA	1	S.A
....4	T0087	1203-001890	IC-POSI.FIXED REG.;3961,SOT223-5,5P,-,PL	1	S.A
....4	T0087	1203-001890	IC-POSI.FIXED REG.;3961,SOT223-5,5P,-,PL	1	S.A
....4	T0087	1203-002186	IC-POSI.FIXED REG.;18,DPAK,3P,240MIL,PLA	1	S.A
....4	T0087	1203-002186	IC-POSI.FIXED REG.;18,DPAK,3P,240MIL,PLA	1	S.A
....4	T0087	1203-002699	IC-POSI.FIXED REG.;78D05,DPAK,3P,6.6X6.1	1	S.A
....4	T0170	1203-003059	IC-SWITCH VOL. REG.;MP1583,SOIC,8P,4.9x3	1	S.A
....4	T0087	1203-003060	IC-POSI.FIXED REG.;AP1084,TO-263,3P,9.97	1	S.A
....4	IC108	1203-003473	IC-VOL.CONVERTER;LT1054L,SOP,8P,4.9x3.9m	1	S.A
....4	T0087	1203-003952	IC-POSI.FIXED REG.;KA7805ERTM,DPAK,3P,6.	1	S.A

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....4	IC502	1204-002464	IC-AUDIO PROCESSOR;STV8257DSX,TQFP,80P,1	1	S.A
....4	IC105	1205-002763	IC-RECEIVER;MST3383M-LF-170,PQFP,128P,20	1	S.A
....4	R412	2007-000052	R-CHIP;10Kohm,1%,1/10W,TP,1608	1	S.A
....4	R417	2007-000052	R-CHIP;10Kohm,1%,1/10W,TP,1608	1	S.A
....4	R466	2007-000052	R-CHIP;10Kohm,1%,1/10W,TP,1608	1	S.A
....4	R1017	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R1018	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R1019	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R134	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R135	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R142	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R143	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R4033	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R4039	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R4063	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R4068	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R444	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R445	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R456	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R458	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R459	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R477	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R481	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R493	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R538	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R543	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R547	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R548	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R555	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R557	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R568	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R571	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R572	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R574	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R575	2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	1	S.A
....4	R1006	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R1007	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R121	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R122	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R160	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R163	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R188	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R4034	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R432	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R460	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R461	2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	S.A
....4	R114	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R539	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R541	2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	S.A
....4	R1001	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R110	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R112	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R113	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R120	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R123	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R172	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R173	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R192	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R193	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R194	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	R196	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R197	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R198	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R4025	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R4027	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R4070	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R4071	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R4072	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R438	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R439	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R440	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R441	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R442	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R443	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R454	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R455	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R468	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R488	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R489	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R490	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R491	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R512	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R514	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R516	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R518	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R520	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R521	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R522	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R524	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R525	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R526	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R531	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R533	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R535	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R552	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R556	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R561	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R580	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R581	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R582	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R613	2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	1	S.A
....4	R457	2007-000075	R-CHIP;220ohm,5%,1/10W,TP,1608	1	S.A
....4	R478	2007-000075	R-CHIP;220ohm,5%,1/10W,TP,1608	1	S.A
....4	R1010	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R111	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R137	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R144	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R147	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R467	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R511	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R513	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R515	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R517	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R519	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R523	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R559	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R570	2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R576	2007-000080	R-CHIP;2Kohm,5%,1/10W,TP,1608	1	S.A
....4	R469	2007-000081	R-CHIP;2.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R4013	2007-000082	R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	R4014	2007-000082	R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R4015	2007-000082	R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R4016	2007-000082	R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R484	2007-000082	R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R485	2007-000082	R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R549	2007-000082	R-CHIP;3.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R158	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R159	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R465	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R529	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R536	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R551	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R583	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R584	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R585	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R586	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R615	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R627	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R629	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R632	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R633	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R639	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R640	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A
....4	R109	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R133	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R136	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R141	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R4018	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R4020	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R4032	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R437	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R505	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R532	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R537	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R542	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R550	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R578	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R652	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A
....4	R562	2007-000091	R-CHIP;12Kohm,5%,1/10W,TP,1608	1	S.A
....4	R563	2007-000091	R-CHIP;12Kohm,5%,1/10W,TP,1608	1	S.A
....4	R567	2007-000091	R-CHIP;12Kohm,5%,1/10W,TP,1608	1	S.A
....4	R534	2007-000092	R-CHIP;15Kohm,5%,1/10W,TP,1608	1	S.A
....4	R540	2007-000092	R-CHIP;15Kohm,5%,1/10W,TP,1608	1	S.A
....4	R544	2007-000093	R-CHIP;20Kohm,5%,1/10W,TP,1608	1	S.A
....4	R546	2007-000093	R-CHIP;20Kohm,5%,1/10W,TP,1608	1	S.A
....4	R626	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R630	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R638	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A
....4	R501	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R502	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R503	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R504	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R506	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R507	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R508	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R509	2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	1	S.A
....4	R577	2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	1	S.A
....4	R566	2007-000103	R-CHIP;120Kohm,5%,1/10W,TP,1608	1	S.A
....4	R446	2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	1	S.A
....4	R447	2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	1	S.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	R448	2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	1	S.A
....4	R449	2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	1	S.A
....4	R450	2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	1	S.A
....4	R451	2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	1	S.A
....4	R452	2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	1	S.A
....4	R453	2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	1	S.A
....4	R510	2007-000119	R-CHIP;560ohm,5%,1/10W,TP,1608	1	S.A
....4	R564	2007-000122	R-CHIP;1.2Kohm,5%,1/10W,TP,1608	1	S.A
....4	R530	2007-000124	R-CHIP;2.2Kohm,5%,1/10W,TP,1608	1	S.A
....4	R131	2007-000126	R-CHIP;4.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R132	2007-000126	R-CHIP;4.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R139	2007-000126	R-CHIP;4.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R140	2007-000126	R-CHIP;4.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R565	2007-000126	R-CHIP;4.3Kohm,5%,1/10W,TP,1608	1	S.A
....4	R573	2007-000129	R-CHIP;27Kohm,5%,1/10W,TP,1608	1	S.A
....4	R124	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R125	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R138	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R161	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R162	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R169	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R170	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R171	2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	S.A
....4	R423	2007-000643	R-CHIP;270ohm,5%,1/10W,TP,1608	1	S.A
....4	R424	2007-000643	R-CHIP;270ohm,5%,1/10W,TP,1608	1	S.A
....4	R605	2007-000683	R-CHIP;3.3Kohm,1%,1/10W,TP,1608	1	S.A
....4	R1002	2007-000729	R-CHIP;300ohm,5%,1/10W,TP,1608	1	S.A
....4	R1003	2007-000729	R-CHIP;300ohm,5%,1/10W,TP,1608	1	S.A
....4	R1004	2007-000729	R-CHIP;300ohm,5%,1/10W,TP,1608	1	S.A
....4	R1005	2007-000729	R-CHIP;300ohm,5%,1/10W,TP,1608	1	S.A
....4	R176	2007-000729	R-CHIP;300ohm,5%,1/10W,TP,1608	1	S.A
....4	R177	2007-000729	R-CHIP;300ohm,5%,1/10W,TP,1608	1	S.A
....4	R178	2007-000729	R-CHIP;300ohm,5%,1/10W,TP,1608	1	S.A
....4	R180	2007-000729	R-CHIP;300ohm,5%,1/10W,TP,1608	1	S.A
....4	R185	2007-000729	R-CHIP;300ohm,5%,1/10W,TP,1608	1	S.A
....4	R186	2007-000729	R-CHIP;300ohm,5%,1/10W,TP,1608	1	S.A
....4	R189	2007-000729	R-CHIP;300ohm,5%,1/10W,TP,1608	1	S.A
....4	R191	2007-000729	R-CHIP;300ohm,5%,1/10W,TP,1608	1	S.A
....4	R462	2007-000729	R-CHIP;300ohm,5%,1/10W,TP,1608	1	S.A
....4	R463	2007-000729	R-CHIP;300ohm,5%,1/10W,TP,1608	1	S.A
....4	R464	2007-000729	R-CHIP;300ohm,5%,1/10W,TP,1608	1	S.A
....4	R156	2007-000821	R-CHIP;390ohm,1%,1/10W,TP,1608	1	S.A
....4	R126	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R127	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R167	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R168	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R4064	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R4065	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R4067	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R433	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R434	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R435	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R496	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R579	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.A
....4	R606	2007-000965	R-CHIP;5.1Kohm,5%,1/10W,TP,1608	1	S.A
....4	R602	2007-000979	R-CHIP;5.6Kohm,1%,1/10W,TP,1608	1	S.A
....4	R426	2007-001044	R-CHIP;56ohm,5%,1/10W,TP,1608	1	S.A
....4	R428	2007-001044	R-CHIP;56ohm,5%,1/10W,TP,1608	1	S.A
....4	R430	2007-001044	R-CHIP;56ohm,5%,1/10W,TP,1608	1	S.A
....4	R431	2007-001044	R-CHIP;56ohm,5%,1/10W,TP,1608	1	S.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	R436	2007-001044	R-CHIP;56ohm,5%,1/10W,TP,1608	1	S.A
....4	R117	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R118	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R119	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R128	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R129	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R130	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R152	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R155	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R157	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R425	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R427	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R429	2007-001164	R-CHIP;75ohm,1%,1/10W,TP,1608	1	S.A
....4	R1008	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R1009	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R1011	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R1012	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R1013	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R1014	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R1015	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R1016	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R164	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R165	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R166	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R174	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R175	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R181	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R183	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R190	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R195	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R199	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.A
....4	R145	2007-007520	R-CHIP;20ohm,1%,1/10W,TP,1608	1	S.A
....4	R146	2007-007520	R-CHIP;20ohm,1%,1/10W,TP,1608	1	S.A
....4	R148	2007-007520	R-CHIP;20ohm,1%,1/10W,TP,1608	1	S.A
....4	R149	2007-007520	R-CHIP;20ohm,1%,1/10W,TP,1608	1	S.A
....4	R150	2007-007520	R-CHIP;20ohm,1%,1/10W,TP,1608	1	S.A
....4	R151	2007-007520	R-CHIP;20ohm,1%,1/10W,TP,1608	1	S.A
....4	R153	2007-007520	R-CHIP;20ohm,1%,1/10W,TP,1608	1	S.A
....4	R154	2007-007520	R-CHIP;20ohm,1%,1/10W,TP,1608	1	S.A
....4	RA101	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA102	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA103	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA104	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA105	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA106	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA107	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA108	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA414	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA415	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA416	2011-000651	R-NET;10ohm,5%,1/16W,L,CHIP,8P,TP,3216	1	S.A
....4	RA401	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA402	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA403	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA404	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA405	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA406	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA407	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA408	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA409	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA410	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	RA411	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA412	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	RA413	2011-000881	R-NET;33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.	1	S.A
....4	C511	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C527	2203-000140	C-CER,CHIP;1.5nF,10%,50V,X7R,1608	1	S.A
....4	C114	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C115	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C116	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C121	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C122	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C124	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C142	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C143	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C144	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C145	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C148	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C150	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C155	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C156	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C4011	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C4012	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C4013	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C4014	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C4015	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C4016	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C4017	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C4018	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C4019	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C4025	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C4030	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C4036	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C4044	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C405	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C407	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C408	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C409	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C410	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C412	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C414	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C419	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C420	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C421	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C422	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C423	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C424	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C425	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C426	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C427	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C428	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C429	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C430	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C431	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C434	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C435	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C436	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C437	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C438	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C439	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C440	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C441	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	C442	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C443	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C444	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C445	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C446	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C447	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C448	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C449	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C450	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C451	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C457	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C459	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C460	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C462	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C464	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C466	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C467	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C469	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C472	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C473	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C476	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C478	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C479	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C480	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C481	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C483	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C484	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C485	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C486	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C487	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C489	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C491	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C492	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C493	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C495	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C496	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C5013	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C5014	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C5018	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C5019	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C5020	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C5021	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C5024	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C5025	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C5026	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C5027	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C509	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C522	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C523	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C524	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C525	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C540	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C548	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C550	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C553	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C561	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C576	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C577	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C582	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C583	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	C592	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C597	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C598	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C601	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C602	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C6023	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C6024	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C6036	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C6037	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C6062	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C6064	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C6066	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C617	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C634	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C635	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C648	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C654	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C656	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C674	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C675	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C679	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C687	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C688	2203-000189	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1608	1	S.A
....4	C117	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C118	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C125	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C126	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C171	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C172	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C515	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C624	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,1608	1	S.A
....4	C403	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C404	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C406	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C411	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C413	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C415	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C416	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C452	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C455	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C456	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C458	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C461	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C463	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C465	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C468	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C474	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C514	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C609	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C612	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,1608	1	S.A
....4	C4033	2203-000384	C-CER,CHIP;0.015nF,5%,50V,C0G,1608	1	S.A
....4	C4026	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C4028	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C4040	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C4042	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C5016	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C5017	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C517	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C518	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C519	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	C520	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C546	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C547	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C571	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C572	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C573	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C574	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C637	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,1608	1	S.A
....4	C127	2203-000626	C-CER,CHIP;0.022nF,5%,50V,C0G,1608	1	S.A
....4	C128	2203-000626	C-CER,CHIP;0.022nF,5%,50V,C0G,1608	1	S.A
....4	C4031	2203-000626	C-CER,CHIP;0.022nF,5%,50V,C0G,1608	1	S.A
....4	C4032	2203-000626	C-CER,CHIP;0.022nF,5%,50V,C0G,1608	1	S.A
....4	C535	2203-000626	C-CER,CHIP;0.022nF,5%,50V,C0G,1608	1	S.A
....4	C544	2203-000626	C-CER,CHIP;0.022nF,5%,50V,C0G,1608	1	S.A
....4	C5012	2203-000753	C-CER,CHIP;330nF,+80-20%,50V,Y5V,TP,3216	1	S.A
....4	C5022	2203-000753	C-CER,CHIP;330nF,+80-20%,50V,Y5V,TP,3216	1	S.A
....4	C5023	2203-000753	C-CER,CHIP;330nF,+80-20%,50V,Y5V,TP,3216	1	S.A
....4	C575	2203-000753	C-CER,CHIP;330nF,+80-20%,50V,Y5V,TP,3216	1	S.A
....4	C4043	2203-000783	C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C551	2203-000783	C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C552	2203-000783	C-CER,CHIP;0.33nF,5%,50V,C0G,1608	1	S.A
....4	C563	2203-000798	C-CER,CHIP;33nF,10%,16V,X7R,TP,1608,-	1	S.A
....4	C564	2203-000798	C-CER,CHIP;33nF,10%,16V,X7R,TP,1608,-	1	S.A
....4	C569	2203-000888	C-CER,CHIP;4.7nF,10%,50V,X7R,1608	1	S.A
....4	C570	2203-000888	C-CER,CHIP;4.7nF,10%,50V,X7R,1608	1	S.A
....4	C529	2203-000972	C-CER,CHIP;47nF,10%,16V,X7R,1608	1	S.A
....4	C5010	2203-000975	C-CER,CHIP;47nF,10%,25V,X7R,TP,1608,-	1	S.A
....4	C5011	2203-000975	C-CER,CHIP;47nF,10%,25V,X7R,TP,1608,-	1	S.A
....4	C578	2203-000975	C-CER,CHIP;47nF,10%,25V,X7R,TP,1608,-	1	S.A
....4	C579	2203-000975	C-CER,CHIP;47nF,10%,25V,X7R,TP,1608,-	1	S.A
....4	C4022	2203-001071	C-CER,CHIP;0.056nF,5%,50V,C0G,1608	1	S.A
....4	C101	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	S.A
....4	C102	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	S.A
....4	C104	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	S.A
....4	C163	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	S.A
....4	C164	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	S.A
....4	C165	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	S.A
....4	C166	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	S.A
....4	C167	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	S.A
....4	C168	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	S.A
....4	C169	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	S.A
....4	C170	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	S.A
....4	C516	2203-001402	C-CER,CHIP;220nF,+80-20%,16V,Y5V,TP,1608	1	S.A
....4	C593	2203-001607	C-CER,CHIP;0.22nF,5%,50V,NP0,1608	1	S.A
....4	C4038	2203-001652	C-CER,CHIP;470nF,+80-20%,16V,Y5V,1608	1	S.A
....4	C567	2203-001652	C-CER,CHIP;470nF,+80-20%,16V,Y5V,1608	1	S.A
....4	C568	2203-001652	C-CER,CHIP;470nF,+80-20%,16V,Y5V,1608	1	S.A
....4	C512	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C526	2203-001656	C-CER,CHIP;0.47nF,5%,50V,NP0,1608	1	S.A
....4	C105	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C108	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C109	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C119	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C120	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C123	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C132	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C134	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C136	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C137	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C138	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	C139	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C146	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C149	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C151	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C152	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C153	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C154	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C502	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C536	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C537	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C538	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C539	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C557	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C565	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C6017	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C6019	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C6022	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C6069	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C630	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C632	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C668	2203-005005	C-CER,CHIP;100nF,10%,16V,X7R,1608	1	S.A
....4	C623	2203-005015	C-CER,CHIP;150nF,+80-20%,16V,Y5V,1608	1	S.A
....4	C4020	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C4021	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C4024	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C4034	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C4035	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C4051	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C4052	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C586	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C587	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C588	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C589	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C590	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C6010	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C6011	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C6012	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C6013	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C6014	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C6015	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C6016	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C6027	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C6028	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C6029	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C6033	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C6035	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C6040	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C652	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C660	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C691	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C692	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C693	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C694	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C695	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C696	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.A
....4	C130	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C133	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C135	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C141	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C401	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	C402	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C4027	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C4037	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C4041	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C4045	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C4046	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C417	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C418	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C432	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C433	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C453	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C454	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C470	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C471	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C475	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C477	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C482	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C488	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C490	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C494	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C580	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C633	2203-005437	C-CER,CHIP;10000nF,+80-20%,10V,Y5V,3216	1	S.A
....4	C585	2203-006036	C-CER,CHIP;680NF,+80-20%,16V,Y5V,TP,1608	1	S.A
....4	C594	2203-006036	C-CER,CHIP;680NF,+80-20%,16V,Y5V,TP,1608	1	S.A
....4	C541	2402-000170	C-AL,SMD;1uF,20%,50V,GP,TP,4.3x4.3x5.4,	1	S.A
....4	C542	2402-000170	C-AL,SMD;1uF,20%,50V,GP,TP,4.3x4.3x5.4,	1	S.A
....4	C554	2402-000170	C-AL,SMD;1uF,20%,50V,GP,TP,4.3x4.3x5.4,	1	S.A
....4	C555	2402-000170	C-AL,SMD;1uF,20%,50V,GP,TP,4.3x4.3x5.4,	1	S.A
....4	C560	2402-000170	C-AL,SMD;1uF,20%,50V,GP,TP,4.3x4.3x5.4,	1	S.A
....4	C562	2402-000170	C-AL,SMD;1uF,20%,50V,GP,TP,4.3x4.3x5.4,	1	S.A
....4	C584	2402-001081	C-AL,SMD;100uF,20%,25V,WT,TP,8.3x8.3x10	1	S.A
....4	C599	2402-001081	C-AL,SMD;100uF,20%,25V,WT,TP,8.3x8.3x10	1	S.A
....4	C653	2402-001081	C-AL,SMD;100uF,20%,25V,WT,TP,8.3x8.3x10	1	S.A
....4	C678	2402-001081	C-AL,SMD;100uF,20%,25V,WT,TP,8.3x8.3x10	1	S.A
....4	C129	2402-001128	C-AL,SMD;100¥iF,20%,16V,-,TP,6.3X5.7mm	1	S.A
....4	C131	2402-001128	C-AL,SMD;100¥iF,20%,16V,-,TP,6.3X5.7mm	1	S.A
....4	C510	2402-001128	C-AL,SMD;100¥iF,20%,16V,-,TP,6.3X5.7mm	1	S.A
....4	C591	2402-001128	C-AL,SMD;100¥iF,20%,16V,-,TP,6.3X5.7mm	1	S.A
....4	C6020	2402-001128	C-AL,SMD;100¥iF,20%,16V,-,TP,6.3X5.7mm	1	S.A
....4	C677	2402-001128	C-AL,SMD;100¥iF,20%,16V,-,TP,6.3X5.7mm	1	S.A
....4	C4023	2402-001129	C-AL,SMD;47UF,20%,16V,WT,TP,6.3X5.2MM	1	S.A
....4	C508	2402-001129	C-AL,SMD;47UF,20%,16V,WT,TP,6.3X5.2MM	1	S.A
....4	C521	2402-001129	C-AL,SMD;47UF,20%,16V,WT,TP,6.3X5.2MM	1	S.A
....4	C530	2402-001129	C-AL,SMD;47UF,20%,16V,WT,TP,6.3X5.2MM	1	S.A
....4	C665	2402-001147	C-AL,SMD;3.3UF,20%,50V,WT,TP,4X5.8MM	1	S.A
....4	C4039	2402-001160	C-AL,SMD;330UF,20%,16V,WT,TP,1008	1	S.A
....4	C566	2402-001160	C-AL,SMD;330UF,20%,16V,WT,TP,1008	1	S.A
....4	C6018	2402-001160	C-AL,SMD;330UF,20%,16V,WT,TP,1008	1	S.A
....4	C6060	2402-001160	C-AL,SMD;330UF,20%,16V,WT,TP,1008	1	S.A
....4	C5015	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C503	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C504	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C505	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C506	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C507	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C513	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C532	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C534	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C543	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C545	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	C549	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C556	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C558	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C559	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C6026	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C6032	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C6034	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C6039	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C6068	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C690	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C699	2402-001178	C-AL,SMD;10uF,20%,16V,WT,TP,4.3x4.3x5.8m	1	S.A
....4	C103	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C501	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C528	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C531	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C533	2402-001183	C-AL,SMD;22UF,20%,16V,WT,TP,5.3X5.3X6MM	1	S.A
....4	C6025	2409-001046	C-ORGANIC,SMD;39uF,20%,16V,WT,TP,6.3x6 m	1	S.A
....4	C4029	2409-001065	C-ORGANIC;82uF,20%,16V,WT,TP,8X6.9mm,-	1	S.A
....4	C6021	2409-001065	C-ORGANIC;82uF,20%,16V,WT,TP,8X6.9mm,-	1	S.A
....4	C6030	2409-001065	C-ORGANIC;82uF,20%,16V,WT,TP,8X6.9mm,-	1	S.A
....4	C6031	2409-001065	C-ORGANIC;82uF,20%,16V,WT,TP,8X6.9mm,-	1	S.A
....4	C6067	2409-001065	C-ORGANIC;82uF,20%,16V,WT,TP,8X6.9mm,-	1	S.A
....4	C616	2409-001065	C-ORGANIC;82uF,20%,16V,WT,TP,8X6.9mm,-	1	S.A
....4	C622	2409-001065	C-ORGANIC;82uF,20%,16V,WT,TP,8X6.9mm,-	1	S.A
....4	C603	2409-001085	C-ORGANIC;47UF,20%,10V,WT,TP,5*5.7MM,1.4	1	S.A
....4	C6038	2409-001085	C-ORGANIC;47UF,20%,10V,WT,TP,5*5.7MM,1.4	1	S.A
....4	C6061	2409-001085	C-ORGANIC;47UF,20%,10V,WT,TP,5*5.7MM,1.4	1	S.A
....4	C6063	2409-001085	C-ORGANIC;47UF,20%,10V,WT,TP,5*5.7MM,1.4	1	S.A
....4	C6065	2409-001085	C-ORGANIC;47UF,20%,10V,WT,TP,5*5.7MM,1.4	1	S.A
....4	C636	2409-001085	C-ORGANIC;47UF,20%,10V,WT,TP,5*5.7MM,1.4	1	S.A
....4	C647	2409-001085	C-ORGANIC;47UF,20%,10V,WT,TP,5*5.7MM,1.4	1	S.A
....4	C655	2409-001085	C-ORGANIC;47UF,20%,10V,WT,TP,5*5.7MM,1.4	1	S.A
....4	C667	2409-001085	C-ORGANIC;47UF,20%,10V,WT,TP,5*5.7MM,1.4	1	S.A
....4	C689	2409-001085	C-ORGANIC;47UF,20%,10V,WT,TP,5*5.7MM,1.4	1	S.A
....4	T0052	2703-000158	INDUCTOR-SMD;1uH,10%,2012	1	S.A
....4	T0052	2703-000158	INDUCTOR-SMD;1uH,10%,2012	1	S.A
....4	T0052	2703-000158	INDUCTOR-SMD;1uH,10%,2012	1	S.A
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A
....4	T0052	2703-001334	INDUCTOR-SMD;1.5uH,10%,2012	1	S.A
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A
....4	T0052	2703-002937	INDUCTOR-SMD;33uH,20%,12x12mm	1	S.A
....4	X401	2801-000258	CRYSTAL-SMD;0.032768MHz,20ppm,SMD,12.5pF	1	S.A
....4	X101	2801-003667	CRYSTAL-SMD;14.31818MHz,30ppm,28-AAN,16,	1	S.A
....4	X501	2801-003954	CRYSTAL-SMD;27MHz,30ppm,28-AAN,16pF,50oh	1	S.A
....4	X402	2801-004496	CRYSTAL-SMD;19.6608MHz,30ppm,HC-49/SM5H,	1	S.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A
....4	IC107	BN11-00002A	IC MASK ROM;CAT24WC08W,SOIC,0to+70,5x4mm	1	S.N.A
....4	L510	BN27-00008A	COIL CHOKE-SMD;SMD12*12*8.5,GH15/17PS,22	1	S.A
....4	L511	BN27-00008A	COIL CHOKE-SMD;SMD12*12*8.5,GH15/17PS,22	1	S.A
....4	L513	BN27-00008A	COIL CHOKE-SMD;SMD12*12*8.5,GH15/17PS,22	1	S.A
....4	L514	BN27-00008A	COIL CHOKE-SMD;SMD12*12*8.5,GH15/17PS,22	1	S.A
....4	MAIN	BN97-00895E	ASSY MICOM-MAIN;M-BTVII40WW-1005,(6A96),	1	S.A
.....5	IC115	1107-001453	IC-FLASH MEMORY;29W160E,16Mbit,2Mx8/1Mx1	1	S.N.A
....4	D140	0401-001099	DIODE-SWITCHING;1N4148WS,75V,150mA,SOD-3	1	S.A
....4	D141	0401-001099	DIODE-SWITCHING;1N4148WS,75V,150mA,SOD-3	1	S.A
....4	D142	0401-001099	DIODE-SWITCHING;1N4148WS,75V,150mA,SOD-3	1	S.A
....4	D143	0401-001099	DIODE-SWITCHING;1N4148WS,75V,150mA,SOD-3	1	S.A
....4	D144	0401-001099	DIODE-SWITCHING;1N4148WS,75V,150mA,SOD-3	1	S.A
....4	D145	0401-001099	DIODE-SWITCHING;1N4148WS,75V,150mA,SOD-3	1	S.A
....4	D146	0401-001099	DIODE-SWITCHING;1N4148WS,75V,150mA,SOD-3	1	S.A
....4	D147	0401-001099	DIODE-SWITCHING;1N4148WS,75V,150mA,SOD-3	1	S.A
....4	IC408	1003-002000	IC-CRT CONTROLLER;FLI8638-LF-BC,PBGA,416	1	S.A
....4	T0087	1203-003695	IC-POSI.FIXED REG.;NCP1117ST33T3G,SOT-22	1	S.A
....4	T0900	1404-001386	THERMISTOR-NTC;10Kohm,3975K,2.1mW/C,TP	1	S.A
....4	R685	2007-000962	R-CHIP;5.1Kohm,1%,1/10W,TP,1608	1	S.A
....4	T0077	BN41-00692E	PCB MAIN;BEETHOVEN 2,FR-4,4L,MP1.3,1.6T,	1	S.N.A
....4	D6020	0404-001271	DIODE-SCHOTTKY;SSA34,40V,3000mA,SMA,TP	1	S.A
...3	CIS	6011-001445	BOLT-SOCKET;4-40 UNC,L7,NI PLT,BRASS,HEX	8	S.N.A
...3	CIS6	BN63-01710B	SHIELD-JACK;BE46PS,SPTE,0.5,CHANGE CORE	1	S.N.A
0.1	M0112	BN91-01014D	ASSY SHIELD;LS40BHPNB/XAA	1	S.N.A
..2	T0081	6001-001920	SCREW-MACHINE;PH,+,WWP,M5,L12,NI PLT,SWR	4	S.A
..2	M0081	6003-000282	SCREW-TAPTITE;BH,+,-,B,M3,L8,ZPC(BLK),SW	10	S.N.A
..2	M0081	6003-000282	SCREW-TAPTITE;BH,+,-,B,M3,L8,ZPC(BLK),SW	7	S.N.A

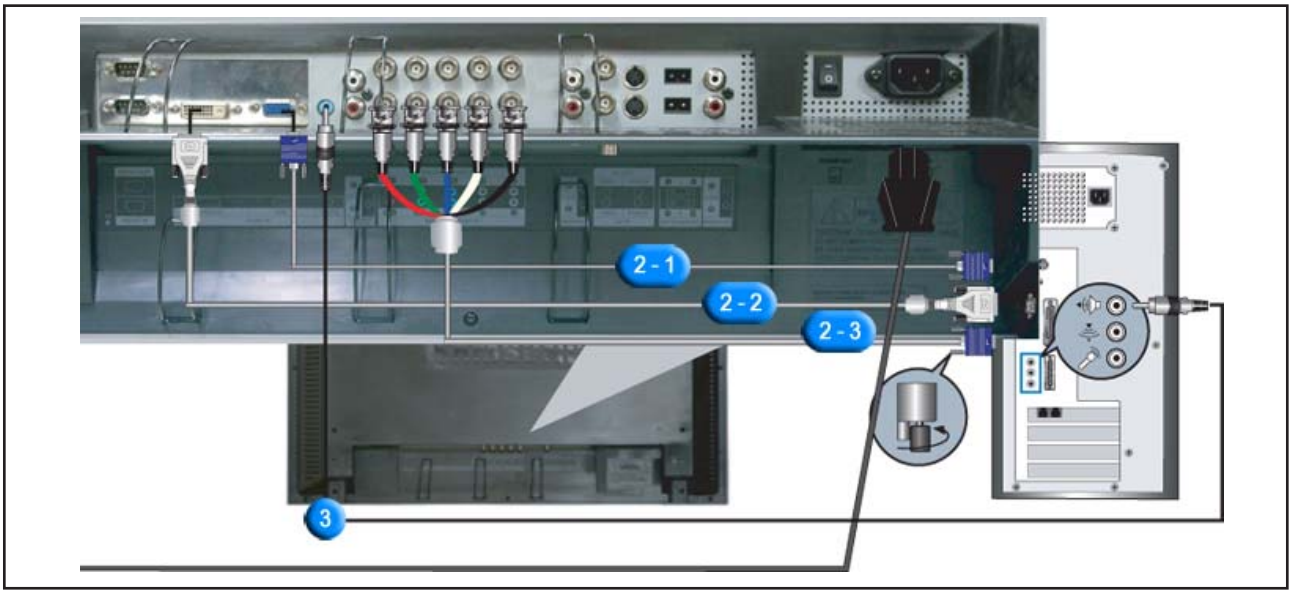
Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
..2	M0081	6003-000282	SCREW-TAPTITE;BH,+,-,B,M3,L8,ZPC(BLK),SW	8	S.N.A
..2	M0081	6003-000337	SCREW-TAPTITE;BH,+,S,M4,L10,ZPC(BLK),SWR	4	S.A
..2	M0081	6003-000337	SCREW-TAPTITE;BH,+,S,M4,L10,ZPC(BLK),SWR	5	S.A
..2	M0081	6003-001026	SCREW-TAPTITE;RH,+,B,M4,L15,ZPC(BLK),SWR	8	S.A
..2	M0081	6003-001026	SCREW-TAPTITE;RH,+,B,M4,L15,ZPC(BLK),SWR	4	S.A
..2	M0162	6502-001067	CABLE CLAMP;DAFC-1300,ID2.2,T5.2,NYLIN6/	1	S.N.A
..2	M0114	AA61-20129A	HOLDER-WIRE;-,NYLON-66,-,-,-,NTR,DAFC-25	2	S.N.A
..2	M2893	BH39-00362B	LEAD CONNECTOR;RE32**,UL1007#26,5P,150mm	1	S.A
..2	M2893	BN39-00634B	LEAD CONNECTOR-LVDS;LS40BHT,UL20276#30,U	1	S.A
..2	M2893	BN39-00691C	LEAD CONNECTOR;LS40BHT,UL1007#26,16P,200	1	S.A
..2	M2893	BN39-00716C	LEAD CONNECTOR;LS40BHT,UL3239#24,2P/4P,5	1	S.A
..2	M2893	BN39-00717A	LEAD CONNECTOR;LE32R71BX/XEC,UL3443#28,5	1	S.A
..2	M2893	BN39-00728A	LEAD CONNECTOR;LS40BHT,UL2464#26,10P,400	1	S.A
..2	M0174	BN44-00134B	IP BOARD;SIP40B,LS40BHT,2.0~3.0mA,6.0~7.	1	S.A
..2	CIS	BN61-01552C	BRACKET;BE46PS,SECC,1.2,CHANGE CORE "B"	2	S.N.A
..2	CCMM1	BN73-00091C	SILICON/RUBBER;BE46PS,SILICON+ALUMINA,W2	2	S.N.A
..2	CCMM1	BN73-00128A	SILICON/RUBBER;LS40BHT,SILICON+ALUMINA,W	1	S.N.A
..2	M0412	BN96-01782G	ASSY BRACKET P-PCB;LS40BHT,SECC,T1.0	1	S.N.A
...3	M0081	6003-000282	SCREW-TAPTITE;BH,+,-,B,M3,L8,ZPC(BLK),SW	2	S.N.A
...3	M0081	6003-001439	SCREW-TAPTITE;BH,+,-,S,M4,L8,ZPC(WHT),SW	1	S.N.A
...3	M0162	6502-001067	CABLE CLAMP;DAFC-1300,ID2.2,T5.2,NYLIN6/	1	S.N.A
...3	M0114	AA61-20069A	HOLDER-WIRE;-,NYLON-66,-,-,-,NTR,V0,PAWH	5	S.N.A
...3	M0131	AA63-01186A	GASKET;BE40TS,Conductive Fabric,7.0 mm,1	3	S.N.A
...3	M0131	AA63-01187A	GASKET;BE40TS,Conductive Fabric,7 mm,13	4	S.N.A
...3	M0131	AA63-01205A	GASKET;BE40TS,Conductive Fabric,8 mm,400	1	S.N.A
...3	M2893	BN39-00615H	LEAD CONNECTOR;LS40BHT,1617#22,UL/CSA,3P	1	S.A
...3	M2893	BN39-00623C	LEAD CONNECTOR;LS40BHT,UL1617#22,UL/CSA,	1	S.A
...3	M0107	BN61-01570E	BRACKET-PCB;LS40BHT,SECC,1.0	1	S.N.A
...3	M0001	BN63-01956A	SHIELD-INSULATOR;BE46PS,PET,T0.35,V2	1	S.N.A
...3	M0131	BN63-02717A	GASKET;LS40BHT,Conductive Fabric,1 mm,46	1	S.N.A
..2	T0152	BN96-01792C	ASSY BRACKET P-VESA;BE40PS,SECC,T1.6	1	S.N.A
...3	M0081	6003-001321	SCREW-TAPTITE;BH,+,B,M4,L8,ZPC(BLK),SWRC	8	S.A
...3	M0131	AA63-01189A	GASKET;BE40TS,Conductive Fabric,10 mm,25	2	S.N.A
...3	M0146	BN61-01553B	BRACKET-PANEL TOP;BE46PS,SECC,1.2	1	S.N.A
...3	M0146	BN61-01553C	BRACKET-PANEL TOP;LS40BH,SECC,1.2,CHANGE	1	S.N.A
...3	M0113	BN61-01555A	BRACKET-VESA;BEETHOVEN 46",SECC,T1.6	2	S.N.A
...3		BN61-01571A	BRACKET-WALL REAR;BEETHOVEN 40",SECC,T1.	2	S.N.A
...3	M0131	BN63-02107A	GASKET;BE40TS,Conductive Fabric,12 mm,13	2	S.N.A
..2	M0006	BN96-02408G	ASSY SHIELD P-COVER;LS40BH,SECC,T1.0,NET	1	S.N.A
...3	M0131	AA63-01191A	GASKET;BE40TS,Conductive Fabric,1.0 mm,1	1	S.N.A
...3	M0131	AA63-01192A	GASKET;BE40TS,Conductive Fabric,1.0 mm,1	2	S.N.A
...3	M0131	AA63-01207A	GASKET;BE40TS/LS40BHT,Conductive Fabric,	1	S.N.A
...3	M0131	AA63-01208A	GASKET;BE40TS,Conductive Fabric,1.0 mm,1	1	S.N.A
...3		BN61-01989B	BRACKET-SHIELD;LS40BH,SECC,1.0,BEETHOVEN	1	S.N.A
...3	T0514	BN61-02416A	BRACKET-SUPPORT;LS40BEP,SECC,0.8	1	S.N.A
...3	T0175	BN62-00027A	HEAT SINK-PS;beethoven2,A1050,T1.0,AL,13	1	S.N.A
...3	T0178	BN63-01735B	SHIELD-PCB;BEETHOVEN40",SECC,0.8,CHANGE	1	S.N.A
...3	M0131	BN63-02580A	GASKET;LS40BHT,Conductive Fabric,2 mm,8	1	S.N.A
...3	M0131	BN63-02581A	GASKET;LS40BHT,Conductive Fabric,1 mm,6	1	S.N.A
...3	M0131	BN63-02582A	GASKET;LS40BHt,Conductive Fabric,1 mm,6	1	S.N.A
...3	M0131	BN63-02585A	GASKET;LS40BHT,Conductive Fabric,1 mm,15	1	S.N.A
...3	M0131	BN63-02722A	GASKET;LS40BHT,Conductive Fabric,2 mm,8	1	S.N.A
..2	T0382	BP61-00495C	HOLDER-CARE;PJT,ACRYL-FOAM,T0.25,W30.0mm	0.2	S.N.A
0.1	M0019	BN91-01017H	ASSY LCD;LS40BHTNS6/EDC	1	S.N.A
..2	M0215	BN07-00264A	LCD-PANEL;LTA400WT-L01,8bit,952*551*51.0	1	S.A
0.1	M0113	BN92-01301Y	ASSY P/MATERIAL;BE40*	1	S.N.A
..2	T0376	6902-000061	BAG AIR;LDPE,T0.2,L1000,W500,TRP,,,	0.06	S.N.A
..2	T0376	6902-000379	BAG AIR;LDPE,T0.2,W1000,L1800,TRP,-,--	0.008	S.N.A

Level	Loc. No.	Code No.	Description & Specification	Q'ty	SA/SNA
..2	T0524	6902-000524	BAG PE;HDPE/NITRON,T0.015/T0.5,W1200,L11	1	S.N.A
..2	T0214	AA60-40006A	PIN-STAPLE;AUTO,33X17.8X2.4,H18,33X17.8X	2	S.N.A
..2	T0214	AA61-20285A	HOLDER-BOX;CTV,PP,NTR,HB	4	S.N.A
..2	T0172	AA69-02609A	BAND-PP;W18,CLEA,1G	9.3	S.N.A
0.1	M0019	BN92-01410P	ASSY LABEL;LS40BEPNS/XSF,CHINA	1	S.N.A
0.1	M0003	BN92-01654X	ASSY BOX;LS40BHPKB/XSF,S/M400PX	1	S.N.A
..2	BOX	BN69-00980A	BOX-00,IN;COMM,DW3,YEL,C-3,W1075*D247*H1	1.01	S.N.A
..2	T0130	BN69-01397G	BOX-00,SET;S/M400PX(LS40BHP),DY-05,AB,YE	1.01	S.N.A
0.1	M0045	BN92-01963G	ASSY ACCESSORY;LS40BHPKB/XSF,BH40PS	1	S.N.A
..2	M0003	BN96-00452E	ASSY STAND P;BE46PS,AL DIECASTING,BKN-S2	1	S.A
...3	M0081	6003-001026	SCREW-TAPTITE;RH,+,B,M4,L15,ZPC(BLK),SWR	8	S.A
...3	M0126	BN69-00995A	BOX ACCESSORY-00;COMM,SW-1,A,YEL,60,440,	1	S.N.A
...3	M0142	BH61-40002A	FOOT-RUBBER;-,NR,PMS428U,GA4237,-,-,-	4	S.N.A
...3		BN61-00419C	STAND-BASE R/L;CK40,AL DIECASTING,SPRAY,	2	S.N.A
...3		BN61-00424A	STAND-SUPPORT;CK40PS,AL D.C	2	S.N.A
..2	M0045	BN96-03825N	ASSY ACCESSORY;LS40BHPKB/XSF	1	S.A
...3	CN906	3705-001262	CONNECTOR-COAXIAL;BNC,ADAPTOR,2MOHM,75OH	4	S.A
...3	T0268	3903-000082	CBF-POWER CORD;DT,CN,IP3/YES(A),I(IEC C1	1	S.A
...3	T0524	6902-000110	BAG PE;LDPE,T0.05,W250,L400,TRP,28,2	2	S.N.A
...3	M0113	BH68-70455A	CARD-TESTED GOODS;ALL (CHINA),SAMAUNG,CH	1	S.N.A
...3	ACCESSORY	BH75-00146B	UNIT-09,WARRANTY;CHINA,-,ASS'Y-W/CARD,BH	1	S.N.A
....4	T0238	BH68-00297E	MANUAL FLYER-WARRANTY CARD;SAMSUNG BASIC	1	S.N.A
....4	T0238	BH68-00297F	MANUAL FLYER-WARRANTY CARD;ENVELOPE,SAMS	1	S.N.A
...3	M0114	BN39-00244B	CBF SIGNAL;MO15PS,15P/15P,20276-N,1830mm	1	S.A
...3	T0251	BN39-00530A	HARNESS;SPD-63P3HD,UL1007#22,UL/CSA,2000	2	S.A
...3	T0074	BN59-00489A	REMOCON;BEETHOVEN 2,TM76B,17.5x4.5x2,Sin	1	S.A
...3	T0059	BN68-00992A	MANUAL FLYER-CARD;COMM,SyncMaster,Lang11	1	S.N.A
...3	M0126	BN69-00350B	BOX ACCESSORY-00;COMM,SW-1,A,YEL,KSD-21,	1	S.N.A
...3	M0246	BN96-00597E	ASSY ACCESSORY-COVER/HOLE;LS40BH,beethov	1	S.N.A
....4	M0081	6003-001026	SCREW-TAPTITE;RH,+,B,M4,L15,ZPC(BLK),SWR	1	S.A
....4		6902-000336	BAG ZIPPER;LDPE,T0.05,W70,L80,TRP,-,--	1	S.N.A
....4	T0081	BN63-00681C	COVER-HOLE;BE46PS,ABS,T1.5,HB,BK07	2	S.N.A
...3	M0215	BN96-03341B	ASSY MANUAL P-IB+QSG;COMM,SyncMaster,W/W	1	S.N.A
....4	QSG	BN68-01021B	MANUAL FLYER-QSG;COMM,SyncMaster,Multe,M	1	S.N.A
....4	I/B	BN59-00528C	S/W DRIVER-03,IB;COMM,W/W,SyncMaster	1	S.N.A

14 참고자료

14-1 타제품과의 연결도

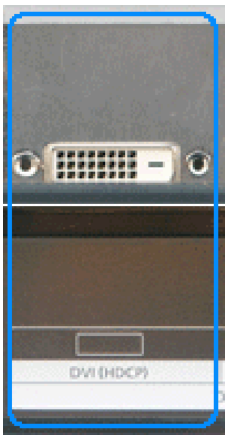
14-1-1 PC와 연결하기



1. 전원선을 220V 또는 110V 전용 콘센트에 꽂아 사용하세요.
2. 컴퓨터와 모니터를 연결할 수 있는 방법은 3가지입니다.
   3가지 연결 가능한 방법 중 하나를 선택해서 연결하세요.

2-1. 그래픽카드에서 D-SUB(아날로그) 출력을 사용할 경우

- D-SUB 케이블로 모니터와 컴퓨터의 D-SUB 단자를 연결하세요.



2-2. 그래픽카드에서 DVI (디지털) 출력을 사용할 경우

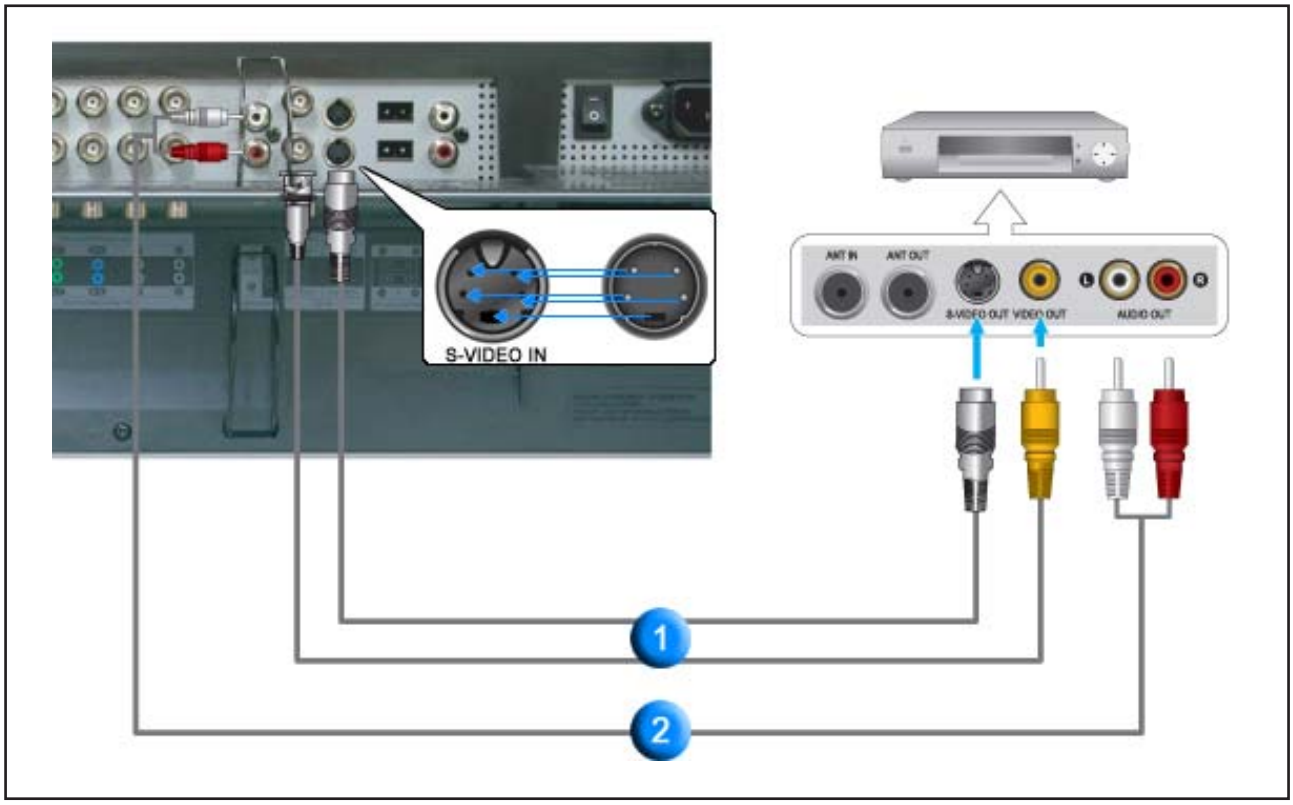
- DVI 케이블로 모니터와 컴퓨터의 DVI 단자를 연결하세요.

2-3. 그래픽카드에서 BNC(아날로그) 출력을 사용할 경우

- BNC 케이블로 모니터의 BNC/COMPONENT IN - R, G, B, H, V 단자와 컴퓨터의 D-SUB 단자를 연결하세요.

3. 소리 연결선을 모니터와 컴퓨터의 사운드카드 스피커 출력 단자에 연결하세요.
4. 컴퓨터와 모니터 전원을 켭니다.

14-1-2 VCR과 연결하기

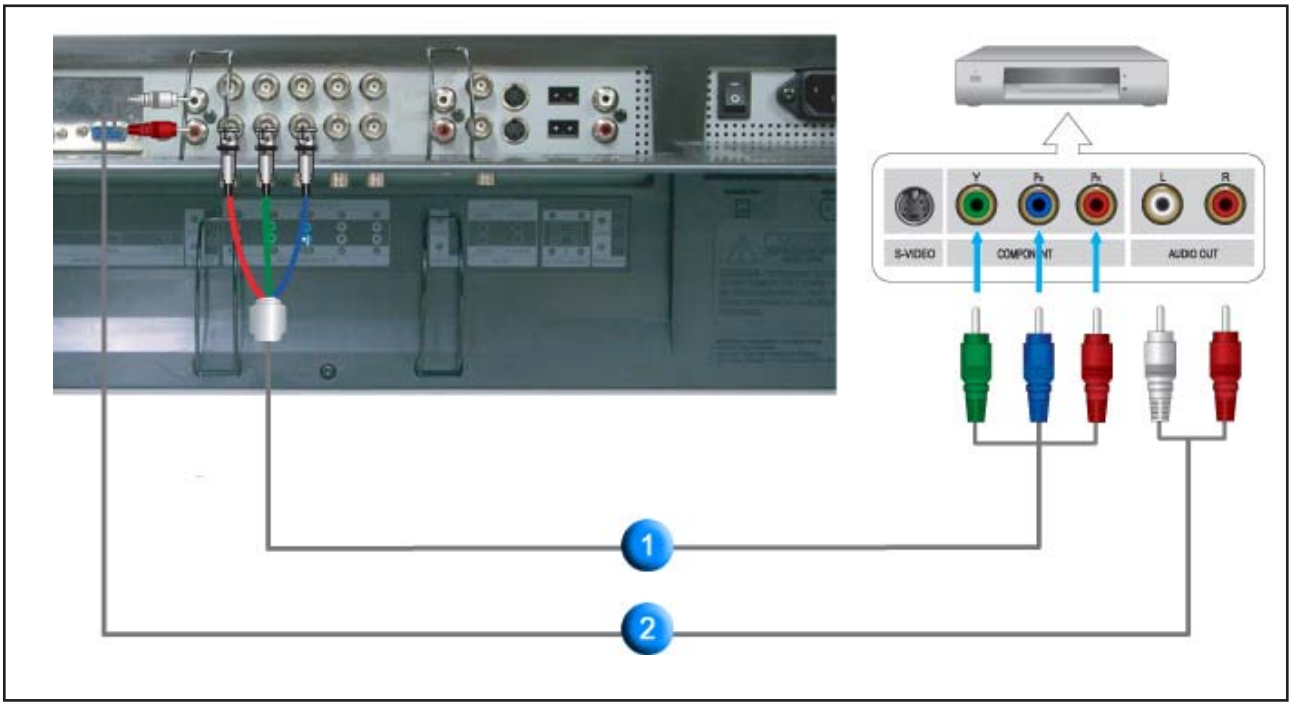


1. DVD, VCR, 캠코더와 같은 AV 입력 장치와 모니터의 AV IN [VIDEO] 또는 AV IN [S-VIDEO]를 S-VHS 또는 BNC 케이블로 연결하세요.

   ** S-VHS 또는 BNC 케이블은 별매품 입니다.*

2. VCR, 캠코더의 오디오(L, R) 단자와 모니터의 AV IN [L-AUDIO-R]를 소리 연결선로 연결하세요.
3. 모니터 전면 또는 리모컨의 'SOURCE' 버튼을 눌러 외부 입력 또는 S-영상 모드를 선택하세요.
4. 테이프를 넣고 재생버튼을 누르세요.

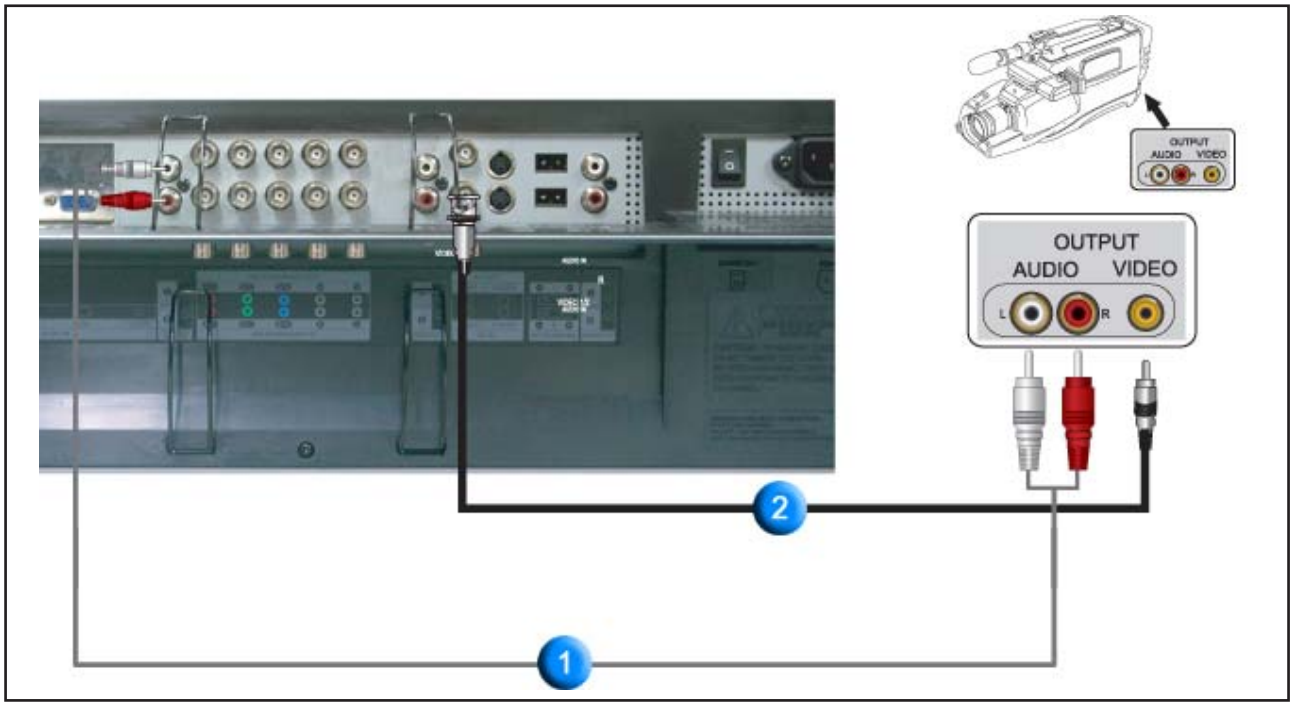
14-1-3 DVD 플레이어와 연결하기



1. 모니터의 COMPONENT AUDIO IN [L-AUDIO-R]와 DVD 플레이어의 오디오 출력 단자에 소리 연결선을 연결하세요.
2. 모니터의 BNC/COMPONENT IN - PR, Y, PB 단자에 컴포넌트 케이블을 연결하세요.

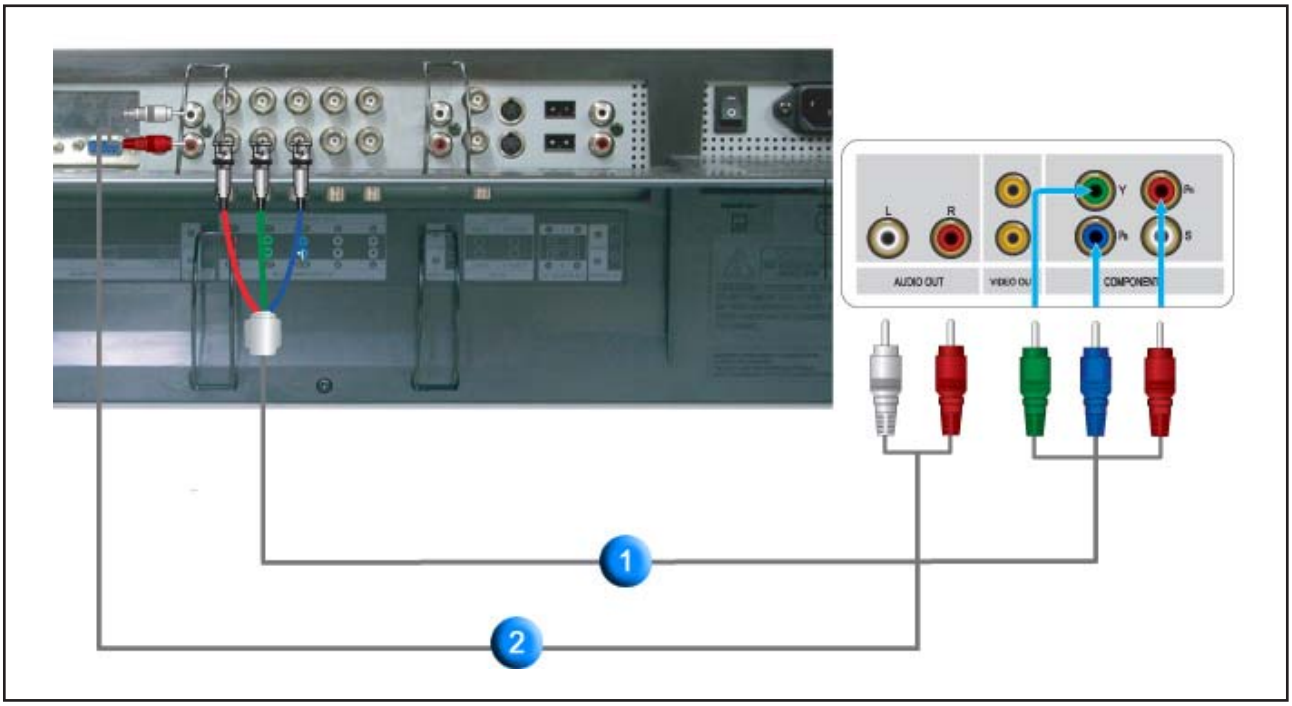
   ** 컴포넌트 케이블은 별매품 입니다.*
3. 모니터 전면 또는 리모컨의 'SOURCE' 버튼을 눌러 컴포넌트 모드를 선택하세요.
4. DVD를 넣고 재생버튼을 누르세요.

14-1-4 캠코더와 연결하기



1. 캠코더의 A/V 출력 단자를 찾으세요. 일반적으로 캠코더의 옆면 또는 뒷면에 있습니다.
   캠코더의 오디오 출력 단자와 모니터의 AV IN [L-AUDIO-R]에 소리 연결선을 연결하세요.
2. 캠코더의 비디오 출력 단자와 모니터의 AV IN [VIDEO]에 비디오 케이블을 연결하세요.
3. 모니터 전면 또는 리모컨의 'SOURCE'버튼을 눌러 외부입력 모드를 선택하세요.
4. 테이프를 넣고 재생버튼을 누르세요.

14-1-5 DVD 셋톱박스 연결하기



1. 모니터의COMPONENT AUDIO IN [L-AUDIO-R]와 셋톱박스의 오디오 출력 단자에 소리 연결선을 연결하세요.
2. 모니터의 BNC/COMPONENT IN - PR, Y, PB 단자와 셋톱박스의 PR, Y, PB 단자에 컴포넌트 케이블을 연결하세요.
3. 모니터 전면 또는 리모컨의 'SOURCE' 버튼을 눌러 컴포넌트 모드를 선택하세요.

14-1-6 스피커와 연결하기

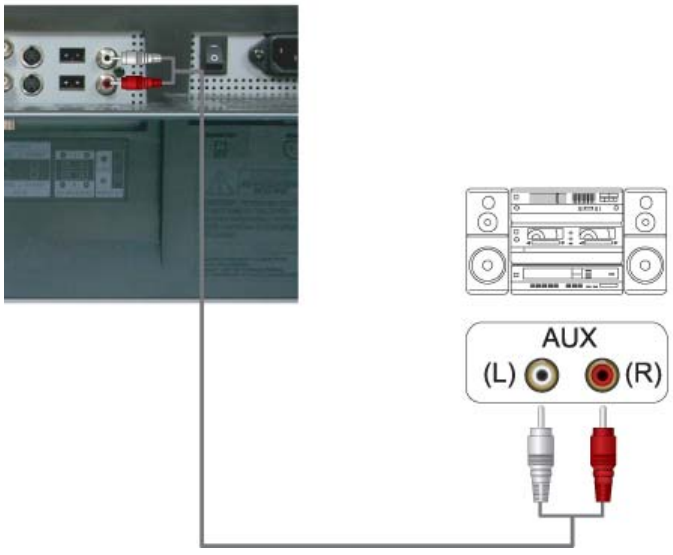
1. 나사로 스피커를 모니터에 고정시키십시오.

* 스피커 세트를 장착할 때는 스피커의 스탠드를 제거하신 후 장착하세요.

2. 스피커 연결 케이블을 사용하여 모니터 뒷면에 있는 스피커 연결 잭과 스피커 뒷면에 있는 스피커 연결 잭을 서로 연결하십시오.

- 스피커가 모니터에 부탁된 상태에서 스피커를 잡고 모니터를 옮기지 마십시오. 모니터 스피커를 연결하는 스피커 브래킷이 손상될 수 있습니다.

14-1-7 오디오 시스템 연결하기

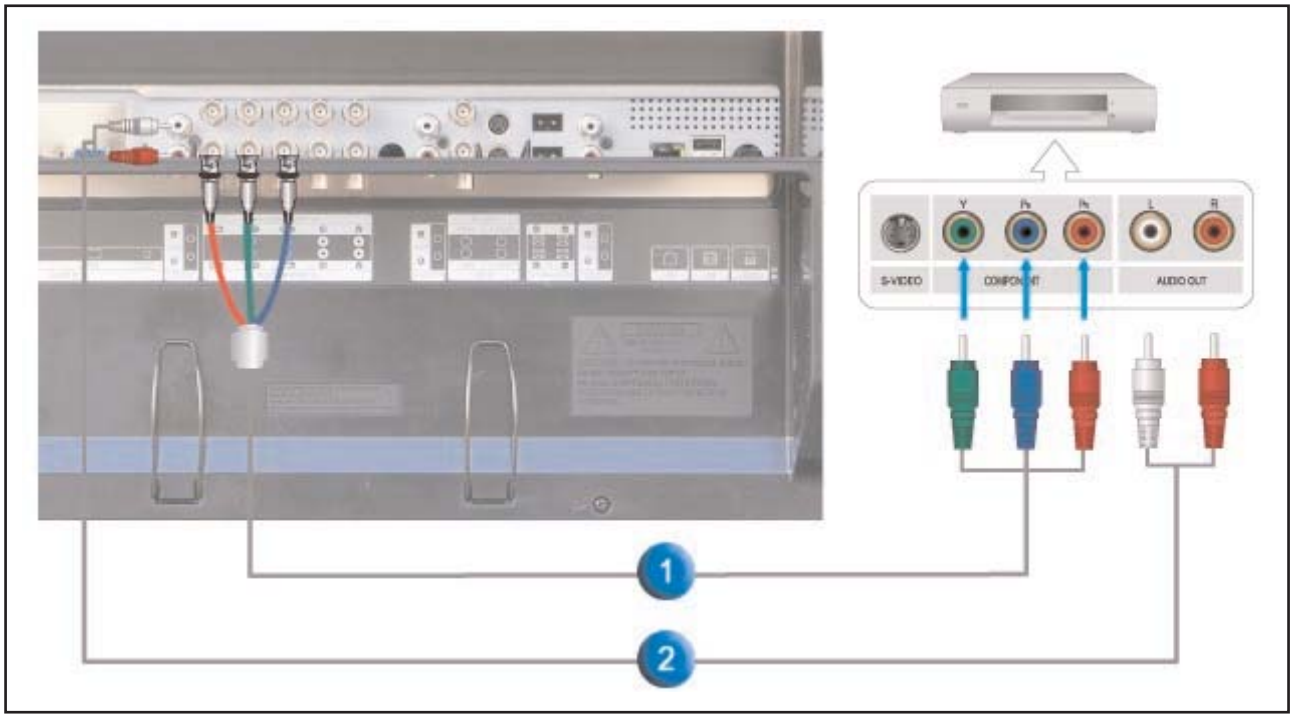


1. 오디오 시스템의 AUX L, R 단자와 모니터의 MONITOR OUT [L-AUDIO-R]에 소리 연결선을 연결하세요.

14-2 PC 호환성 평가결과

No	Chip Maker	Card Name
1	ATI	Radone × 800 Pro
2	Radone × 300	
3	Radone 9600	
4	S3	Prosavage
5	Matrox	G550
6	nVIDIA	GeForce FX 5700
7	PC × 5750	
8	GeForce 6600	
9	GeForce FX 5200	
10	Inter i915G	

14-3 외부기기 연결시 주의사항



DVD 나 STB 단자의 컴포넌트 연결 시 Y, Pb, Pr 단자 색을 구분하여 연결해야만 정상적인 색이 나타납니다.

DVD나 STB의 단자도 입력과 출력이 구분되어 있으므로, 반드시 출력단자와 모니터와 연결해야합니다.

셋트의 단자 중 입력과 출력을 구분하여 연결해야합니다.

14-4 관련 기술 용어 설명

-도트피치(Dot Pitch)
모니터와 화면은 빨강, 초록, 파란색을 표현하는 점들로 구성되어 있으며 점 사이의 거리가 가까울수록 선명하고 해상도가 높습니다. 같은 색이면서도 가장 가까운 점 사이의 거리를
도트피치라고 하며, 단위는 mm입니다.

-수직 주파수
모니터 화면을 소비자가 보게 하기 위해 형광등처럼 1초에 같은 화면을 수십 번 반복해 나타내어야 합니다. 1초에 화면을 반복하여 나타내는 정도를 수직 주파수 또는 Refresh Rate 라고도 하며, 단위는 Hz로 나타냅니다.
예) 같은 빛을 1초에 60번 반복해 나타내는 것을 60Hz라고 합니다.

-수평 주파수
화면의 좌측에서 우측 끝까지 가로선 한 개의 Line을 주사하는 데 걸리는 시간을 수평주기라 하고 이의 역수를 수평 주파수라고 합니다. 단위는 kHz로 나타냅니다.

-넌인터레이스(Non-interlace)방식과 인터레이스(Interlace)방식
화면의 맨 처음부터 마지막까지 가로선을 순서대로 나타내는 것을 넌인터레이스방식(순차주사),
처음 화면은 홀수선, 다음 화면은 짝수선을 나타내는 방식을 인터레이스방식(비월주사)이라고 합니다. 넌인터리이스방식은 화면을 선명하게 나타내 줄 수 있어 대부분 모니터에서 사용하고, 인터레이스방식은 TV에서 사용하는 방식과 같습니다.

-플러그 앤 플레이(Plug & Play)
모니터와 컴퓨터가 서로 자동으로 정보를 교환하여 소비자에게 가장 좋은 모니터 화면으로 설정해 주는 기능입니다. 모니터는 플러그 앤 플레이 기능을 위해 국제 표준 VESA DDC 방식을 따르고 있습니다.

-동기신호
모니터 화면에 일정한 색상신호를 나타내 주기 위해 필요한 기준 신호를 동기신호라고 합니다. 기본적으로 수평 및 수직 동기신호로 구분되며, 이 동기신호에 맞춰 해상도별, 주파수별로 정상적인 색상신호를 모니터에 나타낼 수 있습니다.

-동기신호의 종류
Separate (분리) : 수평, 수직 동기신호를 각각 모니터로 전달하는 방식입니다.
Composite (합성) : 수평, 수직 동기신호를 하나의 신호로 합성하여 모니터로 전달하는 방식으로 모니터 내부에서는 이 신호를 분리하여 색상신호를 화면에 나타냅니다.

-해상도
화면을 구성하는 가로점과 세로점의 개수를 해상도라고 하여 화면의 세밀한 정도를 나타냅니다. 해상도가 클수록 화면에 많은 정보를 나타낼 수 있어 한번에 여러개의 작업을 할 때 사용하면 편리합니다.
예) 해상도가 1024 x 768 일 경우 가로 1,024개의 점(수평해상도)과 세로 768개의 선(수직해상도)으로 이루어집니다.

-Multiple Display Control (MDC)
다중 디스플레이 프로그램(MDC: Multiple Display Control) 은 여러 개의 디스플레이 장치를 한꺼번에 PC상에서 쉽게 제어할 수 있게 해주는 응용 소프트웨어 프로그램입니다. PC와 모니터간의 통신은 직렬 데이터 통신 표준인 RS-232C를 사용합니다.

-넌인터레이스(Non-interlace)방식과 인터레이스(Interlace)방식
처음 화면은 홀수선, 다음 화면은 짝수선을 나타내는 방식을 인터레이스방식(비월주사)이라고 합니다. 넌인터리이스방식은 화면을 선명하게 나타내 줄 수 있어 대부분 모니터에서 사용하고, 인터레이스방식은 TV에서 사용하는 방식과 같습니다.

-DVD
기존의 CD, LD의 장점만을 취하여 디지털 방식으로 고화질/고음질을 실현한 멀티미디어 기기로써, 고화질의 영상을 볼 수 있습니다.

-DTV 방송(디지털 TV 방송)
디지털 영상 신호를 보여줄 수 있는 기능으로 디지털 방송수신기(Set Top Box)를 연결하여 고화질 고선명 디지털 영상 화면을 시청할 수 있습니다.

- RF 케이블(동축선)
일반적으로 TV 안테나에 사용하는 신호선으로, 단면이 둥근 모양입니다.

-S-영상
슈퍼 비디오라고 불리며 이 제품을 이용하면 수평해상도가 800 본까지 되어 선명한 화질을 즐길 수 있습니다.

- VHF/UHF
VHF는 TV의 2채널부터 13채널을 말하고 UHF는 TV의 채널14부터 채널 69를 말합니다.

-수신감도 증폭기(LNA)
인공위성에 적용되는 기술을 이용한 것으로 난시청 지역에서도 더욱 선명한 화질을 볼 수 있도록 약한 전파를 세게 만들어 줍니다.(LNA:Low Noise Amplifier)

-위성방송
인공위성을 이용한 방송으로 난시청 지역 없이 전국 어디서나 선명한 화질과 음질로 시청할 수 있습니다.

-음균형
2개의 스피커를 가진 TV의 경우 각각의 스피커에서 나오는 소리의 크기를 조정하여 음의 균형을 맞추는 것을 말합니다.

-음성다중방송
한국어와 외국어 그리고 스테레오 음악을 들을 수 있는 기능입니다.

-외부입력
TV 방송 이외의 비디오나 캠코더, DVD등의 영상기기를 입력하는 것을 외부입력이라고 합니다.

-안테나 변환기
넓적한 안테나선(피더선)을 TV에 연결하고자 할 때 사용하는 연결 부품입니다.

-영문캡션 (= 자막설정)
방송국이나 비디오 테이프를 통해 영문으로 된 캡션(자막)이나 문자 정보 서비스를 볼 수 있는 기능으로 AFN 방송이나 CC 마크가 있는 비디오 테이프를 이용하여 영어 공부를 할 수 있습니다.

-유선방송
방송국에서 방송하는 VHF, UHF이외에 호텔이나, 학교, 빌딩 등 자체 방송국에서 방영하는 영화, 오락,

각종 교양 프로그램을 시청할 수 있는 방송을 말합니다.(케이블 TV와 구별됨)
95년 3월 이전부터 실시해온 일반 유선 방송을 말합니다.
유선방송이 실시되는 지역에서만 유선방송을 시청할 수 있습니다.

-케이블 TV

KBS, MBC, SBS 등 기존방송 등은 전파를 통해 방송이 되지만 케이블 TV는 케이블(선)을 통하여 방송을 볼 수 있습니다. 이를 보기 위해서는 케이블방송 수신기를 구입하여 연결해야 합니다.

14-5 타이밍 도표

14-5-1 LCD 판넬 모드 : 1 모드

*N/I : Non-Interlaced, I : Interlaced

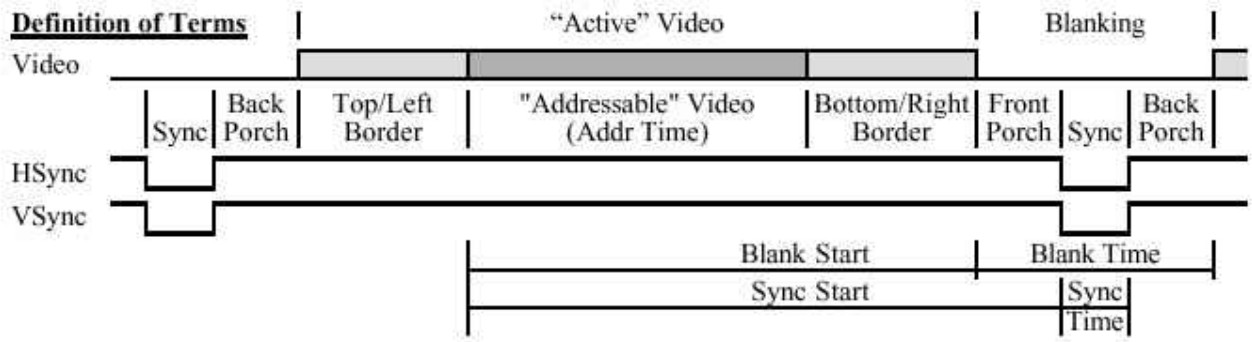
Originator Mode Name Resolution (HxV)	VESA 1360/60Hz 1360x768			
HORIZONTAL Frequency Total time Active time Blank time Border (L / R) Data time Front porch Sync. width Back porch Sync. polarity	 47.712kHz 20.959㎲ 15.973㎲ 5.053㎲ 0.000㎲ 15.906㎲ 0.749㎲ 1.310㎲ 2.994㎲ Positive	blank	blank	blank
VERTICAL Frequency Total time Active time Blank time Border (T / B) Data time Front porch Sync. width Back porch Sync. polarity	 60Hz 16.662ms 16.097ms 0.566ms 0.000ms 16.159ms 0.063ms 0.126ms 0.377ms Positive	blank	blank	blank
Dot Clock	85.500MHz			
Sync. Type Scan Type*	Separate N/I			

14-5-2 Supported 모드 (1)

Originator	IBM	IBM	IBM	VESA	VESA
Mode Name	VGA1	VGA2	VGA3	640/72Hz	640/75Hz
Resolution (HxV)	640x350	720x400	640x480	640x480	640x480
HORIZONTAL					
Frequency	31.469kHz	31.469kHz	31.469kHz	37.861kHz	37.500kHz
Total time	31.778㎲	31.777㎲	31.778㎲	26.413㎲	26.667㎲
Active time	26.058㎲	26.058㎲	26.058㎲	20.825㎲	20.317㎲
Blank time	5.720㎲	5.720㎲	5.720㎲	5.588㎲	6.350㎲
Border (L / R)	0.318㎲	0.318㎲	0.318㎲	0.254㎲	0.000㎲
Data time	25.422㎲	25.422㎲	25.422㎲	20.317㎲	20.317㎲
Front porch	0.318㎲	0.318㎲	0.318㎲	0.508㎲	0.508㎲
Sync. width	3.813㎲	3.813㎲	3.813㎲	1.270㎲	2.032㎲
Back porch	1.589㎲	1.589㎲	1.589㎲	3.810㎲	3.810㎲
Sync. polarity	Positive	Negative	Negative	Negative	Negative
VERTICAL					
Frequency	70.086Hz	70.087Hz	59.940Hz	72.809Hz	75.000Hz
Total time	14.268ms	14.268ms	16.683ms	13.735ms	13.333ms
Active time	11.504ms	13.155ms	15.761ms	13.100ms	12.800ms
Blank time	2.764ms	1.113ms	0.922ms	0.635ms	0.533ms
Border (T / B)	0.191ms	0.222ms	0.254ms	0.211ms	0.000ms
Data time	11.122ms	12.711ms	15.253ms	12.678ms	12.800ms
Front porch	0.985ms	0.191ms	0.064ms	0.026ms	0.027ms
Sync. width	0.064ms	0.064ms	0.064ms	0.079ms	0.080ms
Back porch	1.716ms	0.858ms	0.794ms	0.528ms	0.427ms
Sync. polarity	Negative	Positive	Negative	Negative	Negative
Dot Clock	25.175MHz	28.322MHz	25.175MHz	31.500MHz	31.500MHz
Sync. Type	Separate	Separate	Separate	Separate	Separate
Scan Type*	N/I	N/I	N/I	N/I	N/I

14-5-3 Supported 모드 (2)

Originator Mode Name Resolution (HxV)	VESA 640/85Hz 640x480	MAC 640/67Hz 640x480	VESA 800/56Hz 800x600	VESA 800/60Hz 800x600	VESA 800/72Hz 800x600
HORIZONTAL Frequency Total time Active time Blank time Border (L / R) Data time Front porch Sync. width Back porch Sync. polarity	 43.269kHz 23.111㎲ 17.778㎲ 5.333㎲ 0.000㎲ 17.778㎲ 1.556㎲ 1.556㎲ 2.222㎲ Negative	 35.000kHz 28.571㎲ 21.164㎲ 7.407㎲ 0.000㎲ 21.164㎲ 2.116㎲ 2.116㎲ 3.175㎲ Negative	 35.156kHz 28.444㎲ 22.222㎲ 6.222㎲ 0.000㎲ 22.222㎲ 0.667㎲ 2.000㎲ 3.556㎲ Positive or Negative	 37.879kHz 26.400㎲ 20.000㎲ 6.400㎲ 0.000㎲ 20.000㎲ 1.000㎲ 3.200㎲ 2.200㎲ Positive	 48.077kHz 20.800㎲ 16.000㎲ 4.800㎲ 0.000㎲ 16.000㎲ 1.120㎲ 2.400㎲ 1.280㎲ Positive
VERTICAL Frequency Total time Active time Blank time Border (T / B) Data time Front porch Sync. width Back porch Sync. polarity	 85.008Hz 11.764ms 11.093ms 0.671ms 0.000ms 11.093ms 0.023ms 0.069ms 0.578ms Negative	 66.667Hz 15.000ms 13.714ms 1.286ms 0.000ms 13.714ms 0.086ms 0.086ms 1.114ms Negative	 56.250Hz 17.778ms 17.067ms 0.711ms 0.000ms 17.067ms 0.028ms 0.057ms 0.626ms Positive or Negative	 60.317Hz 16.579ms 15.840ms 0.739ms 0.000ms 15.840ms 0.026ms 0.106ms 0.607ms Positive	 72.188Hz 13.853ms 12.480ms 1.373ms 0.000ms 12.480ms 0.770ms 0.125ms 0.478ms Positive
Dot Clock	36.000MHz	30.240MHz	36.000MHz	40.000MHz	50.000MHz
Sync. Type Scan Type*	Separate N/I	Separate N/I	Separate N/I	Separate N/I	Separate N/I



14-5-4 Supported 모드 (3)

Originator Mode Name Resolution (HxV)	VESA 800/75Hz 800x600	VESA 800/85Hz 800x600	MAC 832/75Hz 832x624	VESA 1024/60Hz 1024x768	VESA 1024/70Hz 1024x768
HORIZONTAL					
Frequency	46.875kHz	53.674kHz	49.726kHz	48.363kHz	56.476kHz
Total time	21.333㎲	18.631㎲	20.110㎲	20.677㎲	17.707㎲
Active time	16.162㎲	14.222㎲	14.524㎲	15.754㎲	13.653㎲
Blank time	5.171㎲	4.409㎲	5.171㎲	4.923㎲	4.053㎲
Border (L / R)	0.000㎲	0.000㎲	0.000㎲	0.000㎲	0.000㎲
Data time	16.162㎲	14.222㎲	14.524㎲	15.754㎲	13.653㎲
Front porch	0.323㎲	0.569㎲	0.559㎲	0.369㎲	0.320㎲
Sync. width	1.616㎲	1.138㎲	1.117㎲	2.092㎲	1.813㎲
Back porch	3.232㎲	2.702㎲	3.910㎲	2.462㎲	1.920㎲
Sync. polarity	Positive	Positive	Positive	Negative	Negative
VERTICAL					
Frequency	75.000Hz	85.000Hz	74.551Hz	60.004Hz	70.069Hz
Total time	13.333ms	11.756ms	13.414ms	16.666ms	14.272ms
Active time	12.800ms	11.179ms	12.549ms	15.880ms	13.599ms
Blank time	0.533ms	0.577ms	0.864ms	0.786ms	0.672ms
Border (T / B)	0.000ms	0.000ms	0.000ms	0.000ms	0.000ms
Data time	12.800ms	11.179ms	12.549ms	15.880ms	13.599ms
Front porch	0.021ms	0.019ms	0.020ms	0.062ms	0.053ms
Sync. width	0.064ms	0.056ms	0.060ms	0.124ms	0.106ms
Back porch	0.448ms	0.503ms	0.784ms	0.600ms	0.513ms
Sync. polarity	Positive	Positive	Positive	Negative	Negative
Dot Clock	49.500MHz	56.250MHz	49.500MHz	65.000MHz	75.000MHz
Sync. Type	Separate	Separate	Separate	Separate	Separate
Scan Type*	N/I	N/I	N/I	N/I	N/I

14-5-5 Supported 모드 (4)

Originator Mode Name Resolution (HxV)	VESA 800/75Hz 800x600	VESA 800/85Hz 800x600	MAC 832/75Hz 832x624	VESA 1024/60Hz 1024x768	VESA 1024/70Hz 1024x768
HORIZONTAL					
Frequency	46.875kHz	53.674kHz	49.726kHz	48.363kHz	56.476kHz
Total time	21.333㎲	18.631㎲	20.110㎲	20.677㎲	17.707㎲
Active time	16.162㎲	14.222㎲	14.524㎲	15.754㎲	13.653㎲
Blank time	5.171㎲	4.409㎲	5.171㎲	4.923㎲	4.053㎲
Border (L / R)	0.000㎲	0.000㎲	0.000㎲	0.000㎲	0.000㎲
Data time	16.162㎲	14.222㎲	14.524㎲	15.754㎲	13.653㎲
Front porch	0.323㎲	0.569㎲	0.559㎲	0.369㎲	0.320㎲
Sync. width	1.616㎲	1.138㎲	1.117㎲	2.092㎲	1.813㎲
Back porch	3.232㎲	2.702㎲	3.910㎲	2.462㎲	1.920㎲
Sync. polarity	Positive	Positive	Positive	Negative	Negative
VERTICAL					
Frequency	75.000Hz	85.000Hz	74.551Hz	60.004Hz	70.069Hz
Total time	13.333ms	11.756ms	13.414ms	16.666ms	14.272ms
Active time	12.800ms	11.179ms	12.549ms	15.880ms	13.599ms
Blank time	0.533ms	0.577ms	0.864ms	0.786ms	0.672ms
Border (T / B)	0.000ms	0.000ms	0.000ms	0.000ms	0.000ms
Data time	12.800ms	11.179ms	12.549ms	15.880ms	13.599ms
Front porch	0.021ms	0.019ms	0.020ms	0.062ms	0.053ms
Sync. width	0.064ms	0.056ms	0.060ms	0.124ms	0.106ms
Back porch	0.448ms	0.503ms	0.784ms	0.600ms	0.513ms
Sync. polarity	Positive	Positive	Positive	Negative	Negative
Dot Clock	49.500MHz	56.250MHz	49.500MHz	65.000MHz	75.000MHz
Sync. Type	Separate	Separate	Separate	Separate	Separate
Scan Type*	N/I	N/I	N/I	N/I	N/I

14-6 표준 신호 모드표

컴퓨터에서 전달되는 신호가 다음의 표준신호모드와 같으면 화면을 자동으로 조정해 줍니다.
단, 컴퓨터에서 전달되는 신호가 표준신호모드와 다르면 화면이 안 나오거나 전원표시등만 켜질 수 있으므로 비디오 카드 사용설명서를 참조하여 아래의 표와 같이 조정해 주세요.

해상도	수평 주파수 (kHz)	수직 주파수(Hz)	클록주파수 (MHz)	극성(수평/수직)
MAC, 640 x 480	35.000	66.667	30.240	-/-
MAC, 832 x 624	49.726	74.551	49.500	+/+
IBM, 640 x 350	31.469	70.086	25.175	+/-
IBM, 640 x 480	31.469	59.940	25.175	-/-
IBM, 720 x 400	31.469	70.087	28.322	-/+
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	43.269	85.008	36.000	-/-
VESA, 800 x 600	35.156	56.250	36.000	+,-/+,-
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x600	46.875	75.000	49.500	+/+
VESA, 800 x600	53.674	85.000	56.250	+/+
VESA, 1024 x 768	48.363	60.004	65.000	-/-
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1024 x 768	68.677	85.997	94.500	+/+
VESA, 1280 x 768	47.776	60.000	79.500	-/+
VESA, 1280 x 1024	63.194	59.957	91.000	+/-
VESA, 1360 x 768	47.712	60.000	85.000	+/+

14-7 패널규격

Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	STICKER_CODE	비 고
SEC	LT140X1-002	BN07-00004A	SA	BN68-00239H	
SEC	LT150XS-L01	BN07-00009A	SB		
SEC	LT150XS-L01-B	BN07-00022A	SC		
SEC	LTM150XS-L02	BN07-00005A	SD		
SEC	LT181E2-132	BN07-00001A	SE		
SEC	LT150XS-T01	BN07-00010A	SF		
SEC	LTM181E3-132	BN07-00019A	SG		
SEC	LT170E2-131	BN07-10001D	SH		
SEC	LT181E2-131	BN07-10001E	SJ		
SEC	LTM170E4-L01	BN07-00018A	SK		
SEC	LTM240W1-L01	BN07-00015A	SL		
SEC	LTM213U3-L01	BN07-00016A	SM		
SEC	LTM150XH-L01	BN07-00026A	SN		
SEC	LTM150XH-L03	BN07-00027A	SP		
SEC	LTM150XS-L01	BN07-00032A	SQ		DELL(ZPD)
SEC	LTM181E4-L01	BN07-00034A	SR		PVA
SEC	LTM170EH-L01	BN07-00036A	SS		TN
SEC	LTM170E5-L01	BN07-00037A	SU		PVA
SEC	LTM150XH-L11	BN07-00041A	SV		
SEC	LTM213U4-L01	BN07-00039A	SW		PVA
SEC	LTM150XH-L01(ZPD)	BN07-00045A	SX		ZPD
SEC	LTM150XH-L04	BN07-00046A	SY		°íÈÖµµ½Å±Ô Àû¿ë PANEL
SEC	LTM170W1-L01	BN07-00047A	SZ		TV¿ë PANEL
SEC	LTM150XH-L06	BN07-00053A	EA		TV¿ë PANEL/450cd °íÈÖµµ¿ë _ Sony& EOS ÆÀ TV¿ë panel
SEC	LTM153W1-L01	BN07-00054A	EB		NIKE MODEL »ç¿ë
SEC	LTM170EH-L05	BN07-00055A	EC		17" EH-L05 °íÈÖµµ¿ë panel EOS proj.
SEC	LTM170E5-L03	BN07-00056A	ED		Dell 1702FP pro. E4´ë¿ëÀ¸ Î µµÀÔ. EH¿Í ±â±¸Àû Compatible
SEC	LTM190E1-L01	BN07-00057A	EE		DELL 1900 FP
SEC	LTM181E5-L01	BN07-00061A	EF		18" narrow bezel GH18PS
SEC	LTM150XP-L01	BN07-00065A	EG		AMLCD PVA PANEL
SEC	LTM240W1-L02	BN07-00062A	EH		15" Wide tv¿ë panel
SEC	LTM170EU-L01	BN07-00071A	EJ		Slim design, TN
SEC	LTM170E5-L04	BN07-00072A	EK		E5-L04 6 bits FRC... for IBM
SEC	LTA220W1-L01	BN07-00074A	EL		22" TV¿ë PANEL
SEC	LTM170E6-L02	BN07-00075A	EM		AMLCD Narrow & slim design 17" PVA mode
SEC	LTM170W1-L01	BN07-00082A	EN		LTM170W1-L01 ZPD panel
SEC	LTM170EH-L01	BN07-00080A	EP		LTM170EH-L01 ZPD panel
SEC	LTM170E5-L01	BN07-00081A	EQ		LTM170E5-L01 ZPD panel
SEC	LTM170EH-L05	BN07-00083A	ER		LTM170EH-L05 ZPD panel
SEC	LTM170E5-L03	BN07-00084A	ES		LTM170E5-L03 ZPD panel
SEC	LTM170EU-L01	BN07-00085A	ET		LTM170EU-L01 ZPD panel
SEC	LTM170E5-L04	BN07-00086A	EU		LTM170E5-L04 ZPD panel
SEC	LTM170E6-L02	BN07-00087A	EV		LTM170E6-L02 ZPD panel
SEC	LTM150XH-L06	BN07-00091A	EW		LCD TV¿ë »öÁÂÇ¥ º¯°æ
SEC	LTM153W1-L01	BN07-00092A	EX		AMLCD WIDE 15",9/10
SEC	LTM170W1-L01	BN07-00100A	EY		»öÁÂÇ¥ º¯°æ ÀÌ¿øÈ- code °ü,®
SEC	LTM170EH-L05	BN07-00097A	EZ		LTM170E5-L05 »öÁÂÇ¥ º¯°æ Panel Code ÀÌ¿øÈ-
SEC	LTA400W1-L01	BN07-00109A	S1		AMLCD 40" TV¿ë PANEL
SEC	LTM153W1-L01	BN07-00110A	S2		»öÁÂÇ¥ º¯°æ 0.280/0.290 , 10000K & ZPD ÀÌ¿øÈ- Panel
SEC	LTM150XH-L06	BN07-00111A	S3		»öÁÂÇ¥ º¯°æ 0.280/0.290 , 10000K & ZPD ÀÌ¿øÈ- Panel
SEC	LTM170W1-L01	BN07-00112A	S4		»öÁÂÇ¥ º¯°æ 0.280/0.290 , 10000K & ZPD ÀÌ¿øÈ- Panel
SEC	LTM170EH-L05	BN07-00113A	S5		»öÁÂÇ¥ º¯°æ 0.280/0.290 , 10000K & ZPD Panel ÀÌ¿øÈ- code
SEC	LTM220W1-L01	BN07-00114A	S6		AMLCD 22" TV¿ë ZPDpanel
SEC	LTM150XH-L06	BN07-00117A	S7		ZPD Panel code ÀÌ¿øÈ-

Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	STICKER_CODE	비 고
SEC	LTM153W1-L01	BN07-00118A	S8		ZPD code ÀÌ¿øÈ-
SEC	LTM170WP-L01	BN07-00119A	S9		NIKE¿ë PVA PANEL
SEC	LTM213U4-L01	BN07-00039A	E1		21.3" NARROW
SEC	LTA260W1-L01	BN07-00121A	E2		VENUS
SEC	LTA220W1-L01	BN07-00074B	E3		22" TV¿ë PANELÀÇ B±Þ PANEL CODE
SEC	LTA320W1-L01	BN07-00108A	E4		AMLCD 32" TV¿ë PANEL
SEC	LTM213U4-L01	BN07-00124A	E5		NARROW BEZEL 21 " PANEL
SEC	LTM170E6-L04	BN07-00129A	E6		HIGHLAND 17" LOW PANEL (TCO03 Àü¿ë PANEL)
SEC	LTM190E1-L01	BN07-00088A	E7		LTM190E1-L01 ZPD panel
SEC	M150X4-L06	BN07-00137A	E8		15" Narrow & Slim panel
SEC	LTA170V1	BN07-00139A	E9		Muse 4:3 VGA TV¿ë 17" Panel
SEC	LTM190E1-L02	BN07-00128A	E10		AMLCD»ç ½Å±Ô Panel . »ç¾ç : 6bit Driver IC
SEC	LTM170EX-L01	BN07-00143A	E11		AMLCD»ç ½Å±Ô Panel °³ß
SEC	LTM170E8-L01	BN07-00144A	E12		AMLCD»ç ½Å±Ô Panel °³ß
SEC	LTM170E6-L04	BN07-00129B	E13		AMLCD»ç ZPD panel (TCO03 Àü¿ë PANEL)
SEC	LTA320W1-L02	BN07-00108B	E14		AMLCD 32" TV B±Þ panel code Ã¤¹ø
SEC	LTM190E1-L03	BN07-00151A	E15		AMLCD 19" ½Å±Ô panel °³ß (TCO03 Àü¿ë PANEL)
SEC	LTM240W1-L03	BN07-00134A	E16		AMLCD 24" panel °³ß
SEC	LTM190E1-L02	BN07-00128B	E17		AMLCD»ç ½Å±Ô Panel . »ç¾ç : 6bit Driver IC(ZPD)
SEC	LTM190E4-L01	BN07-00145A	E18		AMLCD»ç ½Å±Ô Panel °³ß
SEC	LTM170E8-L01	BN07-00158A	E19		ZPD code ÆÄ»ý
SEC	LTM170EX-L01	BN07-00159A	E20		ZPD code ÆÄ»ý
SEC	LTM190E1-L03	BN07-00151B	E21		AMLCD 19" ZPD panel code ÆÄ»ý (TCO03 Àü¿ë PANEL)
SEC	LTA460H1-L01	BN07-00157A	E22		AMLCD 46" TV panel code Ã¤¹ø
SEC	LTM170EU-L11	BN07-00160A	E23		AMLCD 17" ½Å±Ô panel code ÆÄ»ý (TCO03 Àü¿ë PANEL)
SEC	LTM240W1-L03	BN07-00134B	E24		24" panel ZPD Code ÆÄ»ý
SEC	LTM190E4-L01	BN07-00145B	E25		AMLCD 19" ZPD Panel code ÆÄ»ý
SEC	LTM240W1-L03	BN07-00134B	E26		24" panel ZPD Code ÆÄ»ý
SEC	LTM150XO-L01	BN07-00164A	E27		AMLCD 15" XO-L01 ½Å±Ô panel °³ß
SEC	LTM150XO-L01	BN07-00164B	E28		AMLCD 15" XO-L01 ZPD codeÆÄ»ý
SEC	LTM170EU-L11	BN07-00160B	E29		AMLCD 17" ½Å±Ô panel code ÆÄ»ý
SEC	LTA320W2-L01	BN07-00172A	SPZ		AMLCD 32" ½Å±Ô panel
SEC	LTM213U4-L01	BN07-00124B	SPZ		21.3" Narrow PANEL ZPD Panel ÆÄ»ý
SEC	LTM170EU-L11	BN07-00189A	STH		AMLCD EU-L11 Pb free panel code ÆÄ»ý
SEC	LTM170EU-L11	BN07-00189B	STZ		AMLCD EU-L11 Pb free panel ZPD code ÆÄ»ý
SEC	LTM240W1-L04	BN07-00188A	SPH		24" A-DCC Àû¿ë ½Å±Ô panel °³ß
SEC	LTM240W1-L04	BN07-00188B	SPZ		24" A-DCC Àü¿ë panel ZPD code ÆÄ»ý
SEC	LTM190EX-L01	BN07-00191A	STH		AMLCD 19" TN ½Å±Ô Panel
SEC	LTM190EX-L02	BN07-00191B	STZ		AMLCD 19" TN ½Å±Ô Panel ZPD À¿øÈ- ÆÄ
SEC	LTA230W1-L02	BN07-00184A	SPZ		AMLCD 23" 16:9 Panel ½Å±ÔµµÀÔ
SEC	LTA260W2-L01	BN07-00185A	SPZ		AMLCD 26" 16:9 Panel ½Å±ÔµµÀÔ
SEC	LTA400W2-L01	BN07-00186A	SPZ		AMLCD 40" 16:9 Panel ½Å±ÔµµÀÔ
SEC	LTM240M1-L01	BN07-00195A	SPH		24" °íÈÖµµ panel °³ß
SEC	LTM150XO-L01	BN07-00197A	STH		AMLCD 15" XO-L01 Pb free panel code
SEC	LTM150XO-L01	BN07-00197B	STZ		AMLCD 15" XO-L01 Pb free panel ZPD code
SEC	LTM170EU-L21	BN07-00202A	STZ		AMLCD EU-L21 ZPD ½Å±Ô code ÆÄ»ý
SEC	LTA460W2-L03	BN07-00187A	SPZ		BEETOVEN 46"ZPD½Å±Ô ÆÇ³Ú
SEC	LTM240M1-L01	BN07-00195B	SPZ		24" °íÈÖµµ panel ZPD code ÆÄ»ý
SEC	M170EX-L21	BN07-00206A	STZ		AMLCD LTM170EX-L21 ZPD ½Å±Ô code ÆÄ»ý
SEC	LTA460H3-L01	BN07-00200A	SPZ		AMLCD 46" LED BLU panel
SEC	LTM170EU-L15	BN07-00214A	STZ		AMLCD EU-L15 TV¿ë °íÈÖµµ ZPD ½Å±Ô code ÆÄ»ý
SEC	LTM170E8-L21	BN07-00218A	SPZ		AMLCD LTM170E8-L21 PVA ZPD ½Å±Ô code ÆÄ»ý
SEC	LTM190EX-L21	BN07-00222A	STZ		DISPLAY LCD
SEC	LTM201U1-L01	BN07-00190B	SPZ		? AMLCD 20.1" Normal panel ZPD code ÆÄ»ý

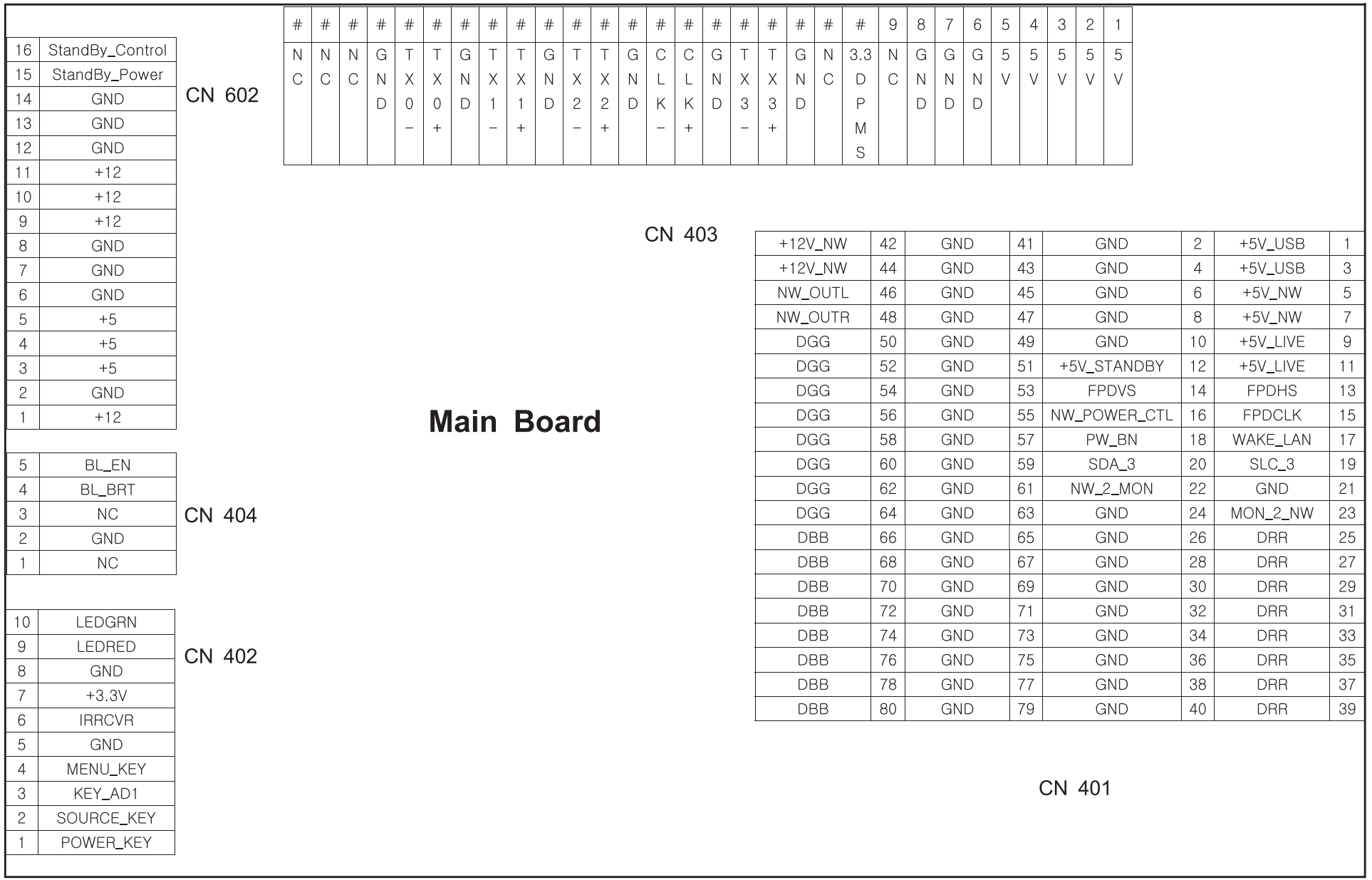
Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	STICKER_CODE	비 고
SEC	LTM190E4-L21	BN07-00223A	SPZ		HAYDN 17" PZD ÄÚµå PANELÆÄ»ý
SEC	LTA570H1-L01	BN07-00196A	SPZ		AMLCD 57" ½Å±Ô panel °³ß
SEC	LTM150XO-L21	BN07-00229A	STZ		AMLCD 15" XO-L21 8ms panel code ½ÅÃ»
SEC	LTA260W2-L11	BN07-00239A	SPZ		AMLCD 26" 16:9 7Line Panel ½Å±ÔµµÀÔ
SEC	LTA400WS-LH1	BN07-00245A	SPZ		AMLCD 40" 16:9 SPVA 90% Panel ½Å±ÔµµÀÔ
SEC	LTM213U6-L01	BN07-00231A	SPZ		AMLCD 21.3" PVA ½Å±Ô Panel Code ÁøÇà
SEC	LTA320WS-LH2	BN07-00244A	SPZ		AMLCD 32" 16:9 SPVA 90% Panel ½Å±ÔµµÀÔ
SEC	LTA400WS-LH1	BN07-00245A	SPZ		AMLCD 40" 16:9 SPVA 90% Panel ½Å±ÔµµÀÔ
SEC	LTM190M2-L01	BN07-00227A	STZ		AMLCD 19" TN Wide ½Å±Ô Panel Code ÁøÇà
SEC	LTM201UX-L01	BN07-00249A	STZ		AMLCD 20.1" TN ½Å±Ô Panel Code ÁøÇà
SEC	LTM240M1-L02-A05	BN07-00250A	SPZ		24" °íÈÖµµ Slim panel ZPD code ÆÄ»ý
SEC	LTA320W3-L02	BN07-00219A	SPZ		AMLCD 32" ¸é±¤¿ø ½Å±Ô Panel
CPT	CLAA150XG09	BN07-00141A	PA		CPT 15" Monitor¿ë ½Å±Ô panel °³ß
CPT	CLAA170EA02	BN07-00148A	PB		17" CPT ½Å±Ô°³ß panel
CPT	CLAA170EA02	BN07-00148B	PC		17" CPT ZPD panel code ÆÄ»ý
CPT	CLAA150XG09	BN07-00141B	PTZ		CPT 15" panel ZPD code ÆÄ»ý(GOYA-PJT)
CPT	CLAA150XP01	BN07-00173A	PTH		CPT 15" PSWG code ÆÄ»ý
CPT	CLAA150XP01	BN07-00173B	PTZ		CPT 15" PSWG panel ZPD code ÆÄ»ý
CPT	CLAA170EA07	BN07-00174A	PTH		CPT 17" PSWG code ÆÄ»ý
CPT	CLAA170EA07	BN07-00174B	PTZ		CPT 17" PSWG type ½Å±Ô Panel code ÁøÇà°Ç
CPT	CLAA170EA07Q	BN07-00220A	PTZ		CPT 17" PSWG R/T 8msec code ÆÄ»ý
CPT	CLAA170EA07Q	BN07-00220B	PTH		CPT 17" PSWG R/T 8msec HPD code ÆÄ»ý
CPT	CLAA150XP01F	BN07-00236A	PTZ		CPT 15" PSWG panel ZPD & Lead free code ÆÄ»ý
TOSHIBA	LTM15C419(A)	BN07-00002A	TA		
TOSHIBA	LTM15C423(B)	BN07-00006A	TB		
TOSHIBA	LTM18C161	BN07-00008A	TC		
TOSHIBA	LTM15C443	BN07-00031A	TD		
TOSHIBA	LTM15C458	BN07-00043A	TE		
TOSHIBA	LTM15C458S	BN07-00077A	TF		TSB 15" °íÈÖµµ Panel
TOSHIBA	LTM15C458	BN07-00078A	TG		Toshiba ZPD panel
TOSHIBA	LTM15C458S	BN07-00099A	TH		TSB LTM15C458S (ZPD)
HANNSTAR	HSD150MX41A(A)	BN07-00020A	NA		TTL¼æ½Ä
HANNSTAR	HSD150MX12	BN07-00030A	NB		LVDS¼æ½Ä
HANNSTAR	HSD170ME13	BN07-00180A	NTH		Hannstar 17" TN ½Å±Ô panel °³ß
HANNSTAR	HSD170ME13	BN07-00180B	NTZ		Hannstar 17" TN ½Å±Ô panel °³ß ZPD code ÆÄ»ý
HANNSTAR	HSD190ME12	BN07-00210A	NTZ		Hannstar 19" TN ½Å±Ô panel °³ß
HANNSTAR	HSD150MX17-A	BN07-00226A	NTZ		Hannstar 15" slim panel ZPD code ÆÄ»ý
TORISAN	TM150XG-22L03(A)	BN07-00021A	RA		
TORISAN	TM150XG-26L06	BN07-00042A	RB		
TORISAN	TM181SX-76N01	BN07-00048A	RC		
TORISAN	TM150XG-26L06	BN07-00059A	RD		15" XGA TN MODE(ZPD)
TORISAN	TM290WX-71N31	BN07-00063A	RE		RS24NS (TORISAN 29" ½Å±Ô PANEL)
TORISAN	TM396WX-71N31	BN07-00064A	RF		RS24NS (TORISAN 40" ½Å±Ô PANEL)
TORISAN	TM150XG-26L09	BN07-00073A	RG		15" TV PANEL ¿ë
TORISAN	TM150XG-26L10	BN07-00089A	RH		L10(D/IC¿Ü °¯°æ) ZPD
TORISAN	TM150XG-26L10	BN07-00090A	RJ		L10 NORMAL
TORISAN	TM190SX-70N01	BN07-00098A	RK		Torisan 19" Panel
TORISAN	TM181SX-76N01	BN07-00106A	RL		ZPD Panel code ÀÌ¿øÈ-
TORISAN	TM190SX-70N01	BN07-00107A	RM		ZPD Panel code ÀÌ¿øÈ-
TORISAN	TM290WX-71N31	BN07-00115A	RN		Torisan 29" TV¿ë panel »öÁÂÇ¥ °¯°æ panel

Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	STICKER_CODE	비 고
TORISAN	TM396WX-71N31	BN07-00116A	RP,Q		Torisan 40" TV¿ë panel »öÁÂÇ¥ º¯°æ panel
TORISAN	TM22OWX-71N31	BN07-00125A	RR		TORISAN 22" TV PANEL °³ß(ZPD)
TORISAN	TM22OWX-71N31	BN07-00127A	RS		TORISAN 22" TV PANEL °³ß(HPD)
TORISAN	TM396WX-71N32A	BN07-00150A	RT		120V inverter Àû¿ë panel
TORISAN	TM190SX-70N02	BN07-00154A	RMH		Torisan 6bit panel code ÆÄ»ý
TORISAN	TM190SX-70N02	BN07-00154B	RMZ		Torisan 6bit panel code ÆÄ»ý
TORISAN	TM150XG-A01	BN07-00162A	RTH		Torisan 15" Narrow & Slim panel °³ß
TORISAN	TM150XG-A01	BN07-00162B	RTZ		Torisan 15" N&S panel ZPD code ÆÄ»ý
SHARP	LQ181E1DG11(A)	BN07-10001C	PA		
SHARP	LQ150X1LW71	BN07-00067A	PB		SHARP 15" PVA PANEL
SHARP	LQ370T3LZ41	BN07-00216A	FAZ		Rome2
HITACHI	TX38D12VC0CAA(A)	BN07-00003A	HA		
HITACHI	TX43DVCOCAB	BN07-00060A	HB		17" SXGA PVA MODE
HITACHI	TX43D15VC0CAB	BN07-00101A	HC		ZPD Panel ÀÌ¿øÈ-
HITACHI	TX51D11VC0CAB	BN07-00122A	HD		20.1" NARROW
HITACHI	TX54D11VC0CAB	BN07-00123A	HE		21.3" NARROW
HITACHI	TX80D12VC0CAB	BN07-00169A	HIZ		Hitachi 32" TV¿ë ½Å±Ô panel °³ß(ZPD)
HITACHI	TX54D11VC0CAB	BN07-00123B	HIZ		Hitachi 21.3"ZPD panel
IBM	ITSX94S	BN07-00017A	IA		
UNIPAC	UM170E0	BN07-00028A	UA		Loaded by cisdba
HYUNDAI	HT15X13	BN07-00035A	DA		
HYUNDAI	HT17E11-200	BN07-00049A	DB		TN MODE
HYUNDAI	HT17E11-300	BN07-00093A	DC		HT17E11-300 ZPD panel
HYUNDAI	HT17E11-400	BN07-00094A	DD		HT17E11-400 normal panel
HYUNDAI	HT17E11-400	BN07-00095A	DE		HT17E11-400 ZPD panel code ÀÌ¿øÈ-
HYUNDAI	HT17E12	BN07-00096A	DF		HT17E12 (Narow & slim Design)
HYUNDAI	HT17E12	BN07-00105A	DG		ZPD Panel code ÀÌ¿øÈ-
HYUNDAI	HT15X15-D00	BN07-00146A	DH		Ares 15" Hydis TV¿ë Panel °³ß
HYUNDAI	HT15X15-D01	BN07-00146B	DJ		Ares 15" Hydis TV¿ë Panel HPD ÆÄ»ý
HYUNDAI	HT17E13-100	BN07-00167A	DTH		PINEHURST-2(IBM) PJT 17" HYDIS PANEL ÆÄ»ý
HYUNDAI	HT17E13-100	BN07-00167B	DTZ		PINEHURST-2(IBM) Hydis 17" ZPD code ÆÄ»ý
HYUNDA	HT170EX1-100	BN07-00240A	DTZ		17" EX compatible Hydis Slim panel °³ß
ACER	L170E3	BN07-00044A	AA		TN(ADT)
ACER	M170EN05	BN07-00076A	AB		AU 17" Panel (Narrow & slim design)
ACER	M170EN05	BN07-00102A	AC		ZPD Panel code ÀÌ¿øÈ-
ACER	M190EN02	BN07-00170A	AMH		AU Monitor 19" ½Å±Ô panel °³ß(P19-1S)
ACER	M190EN02	BN07-00170B	AMZ		AU 19" ZPD code ÆÄ»ý(ZPD)
ACER	M170EN06	BN07-00171A	ATH		AU Monitor 17" ½Å±Ô panel °³ß
ACER	T260XW01	BN07-00163A	AMZ		AU 26" ½Å±Ô panel °³ß(NF26EO)
ACER	A201SN01	BN07-00177A	ATZ		AU TV panel 20.1" TN SVGA ½Å±Ô panel °³ß
ACER	M170EN06	BN07-00171B	ATZ		AU Monitor 17" ZPD code ÆÄ»ý
ACER	T315XW01	BN07-00194A	AMZ		AU 32" ½Å±ÔµµÀÔ
ACER	M170EG01	BN07-00192A	ATH		AU TN PSWG type ½Å±Ô Panel code ÁøÇà°Ç
ACER	M170EG01	BN07-00192B	ATZ		AU TN PSWG type ½Å±Ô Panel ZPD ÆÄ»ý code ÁøÇà°Ç
ACER	M190EN04	BN07-00203A	ATH		AU Monitor 19" ZPD ½Å±Ôcode ÆÄ»ý
ACER	T260XW02	BN07-00208A	AMZ		AUO 26" ÀÌ¿øÈ- µµÀÔ
ACER	M170EG01 V8	BN07-00221A	ATZ		AU TN PSWG type ½Å±Ô Panel (8msec) ZPD ÆÄ»ý code
ACER	T260XW02	BN07-00233A	AMZ		AUO 26" Panel ½Å±Ô µµÀÔ (Cosmetic spec down grade)

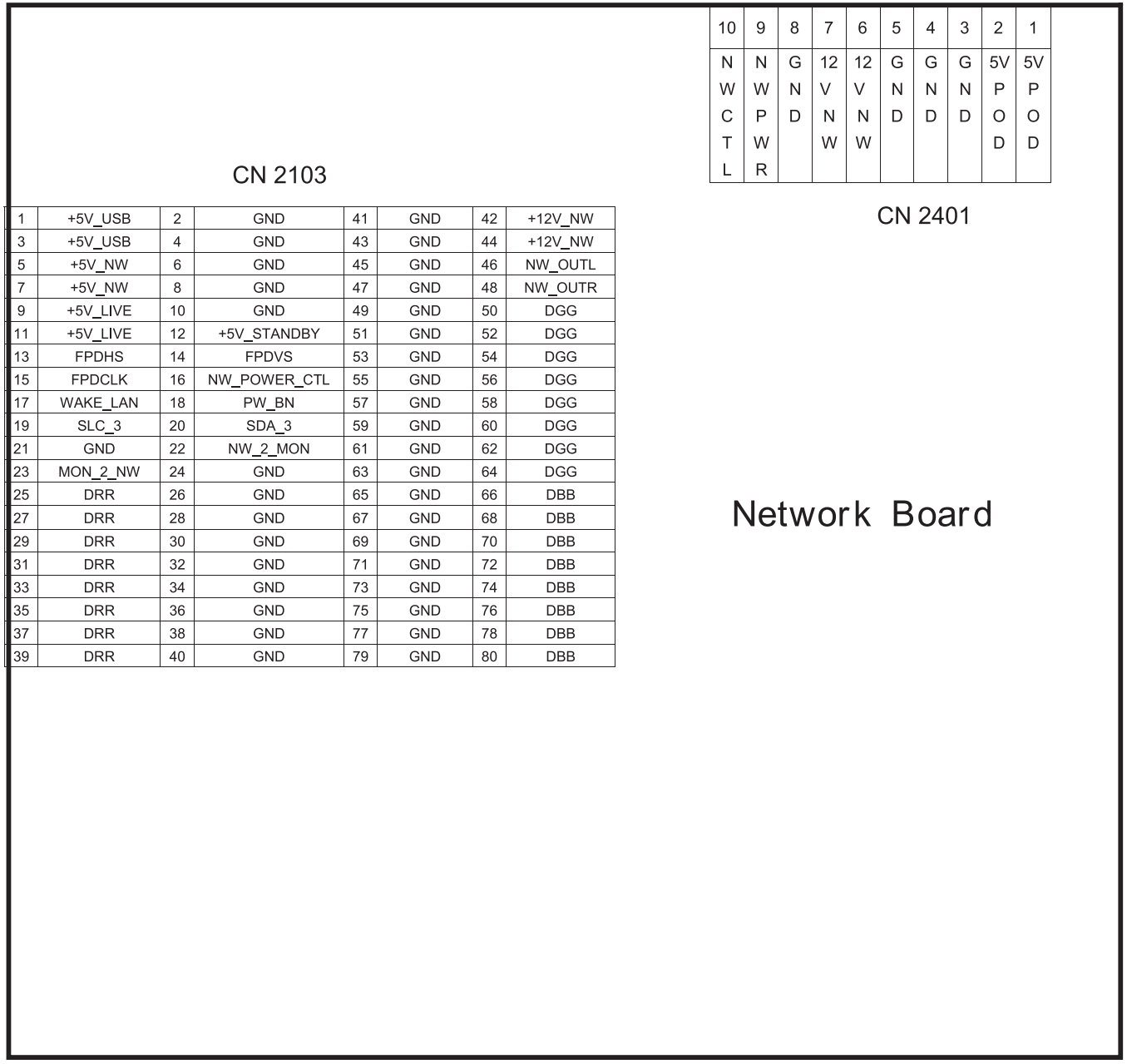
Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	STICKER_CODE	비 고
ACER	T315XW01	BN07-00234A	AMZ		AUO 32" Grade ½Å±ÔµµÀÔ (Cosmetic spec down grade)]
ACER	M190EN03	BN07-00224A	AMZ		AU Monitor 19" MVA ½Å±Ôcode ÆÄ»ý
ACER	T315XW01	BN07-00237A	AMZ		LCD TV VE project ½Å±Ô µµÀÔ : DBEF sheet »èÁ¦ * Panel Çü¸í¿¡ Model ±¸Ð¿ë ve
ACER	T315XW01	BN07-00238A	AMZ		LCD TV VE project ½Å±Ô µµÀÔ : DBEF sheet »èÁ¦ + 'A-' grade * Panel
ACER	M201UN02 V3	BN07-00168A	AMZ		
ACER	M201UN02 V3	BN07-00168B	AMH		
ACER	M190EN04 V7	BN07-00248A	ATZ		AU Monitor 19" TN Glare ZPD ½Å±Ôcode ÆÄ»ý
ACER	A070VW01	BN07-00235A	ATZ		ÀüÀÚ Album¿ë ½Å±Ô Panel code ÆÄ»ý
ACER	T315XW01	BN07-00253A	AMZ		LCD TV VE item Àû¿ë model * Panel Çü¸í¿¡ Model ±¸Ð¿ë version Ãß°¡ : T315XW01
CHIMEI	M170E3-LO1	BN07-00050A	CA		TN PANEL
CHIMEI	M150X3-L01	BN07-00051A	CB		COMPATIBLE
CHIMEI	M170E4-L01	BN07-00052A	CC		MVA PANEL
CHIMEI	M150X2-L01	BN07-00066A	CD		CHIME 15"I PVA PANEL
CHIMEI	M150X3-L01	BN07-00079A	CE		Chimei ZPD panel
CHIMEI	M170E3-L01	BN07-00103A	CF		ZPD Panel code Àì¿øÈ-
CHIMEI	M170E4-L01	BN07-00104A	CG		ZPD Panel code Àì¿øÈ-
CHIMEI	V296W1-L01	BN07-00120A	CH		MVA
CHIMEI	M170E6-L02	BN07-00126A	CJ		HIGHLAND 17" LOW PANEL
CHIMEI	M190E2-L01	BN07-00131A	CK		GH19AS,BS CHIMEI PANEL
CHIMEI	M150X4-L06	BN07-00137A	CL		15" Narrow & Slim panel
CHIMEI	M170E6-L01	BN07-00133A	CM		2003-03-11 ¾÷Ã¼°¯°æ(Áø½Å±Ð)
CHIMEI	M170E6-L01	BN07-00133B	CN		ZPD ÆÄ»ý panel
CHIMEI	V201V1-T01	BN07-00135A	CP		CHIMEI 20.1" panel °³ß
CHIMEI	M170E6-L02	BN07-00126B	CQ		HIGHLAND 17" LOW PANEL ZPD ÆÄ»ý panel
CHIMEI	M170E6-L05	BN07-00152A	CR		CMO 17" ½Å±Ô panel °³ß code
CHIMEI	M170E6-L05	BN07-00152B	CS		CMO 17" ZPD panel code ÆÄ»ý
CHIMEI	M150X4-L06	BN07-00137B	CT		Chimei 15" Narrow & Slim panel ZPD ÆÄ»ý
CHIMEI	M170E5-L05	BN07-00165A	CTH		CMO 17" ½Å±Ô panel °³ß code(GOYA2-PJT)
CHIMEI	M170E5-L05	BN07-00165B	CTZ		CMO 17" ZPD panel(GOYA2-PJT)
CHIMEI	V230W1-L02	BN07-00209A	CMZ		CMO 23" ½Å±Ô °³ß
CHIMEI	V320B1-L01	BN07-00207A	CMZ		CMO 32" ½Å±Ô °³ß
CHIMEI	V270W1-L01	BN07-00136A	CMZ		CHI MEI 27" panel °³ß
CHIMEI	M190E5-L0A	BN07-00213A	CTZ		
CHIMEI	M190E3-L0A	BN07-00212A	CMZ		CMO M190E3-L0A MVA Type ½Å±Ô code ÆÄ»ý
CHIMEI	M170E7-L01	BN07-00232A	CTZ		CMO 17" Slim TN ZPD Type ½Å±Ô code ÆÄ»ý
NEC	SVA150XG04TB	BN07-00225A	BTZ		SVA NEC 15" panel ZPD code ½ÅÃ»

8 Wiring Diagram

8-1 Main Board Wiring Diagram



8-2 Network Board Wiring Diagram



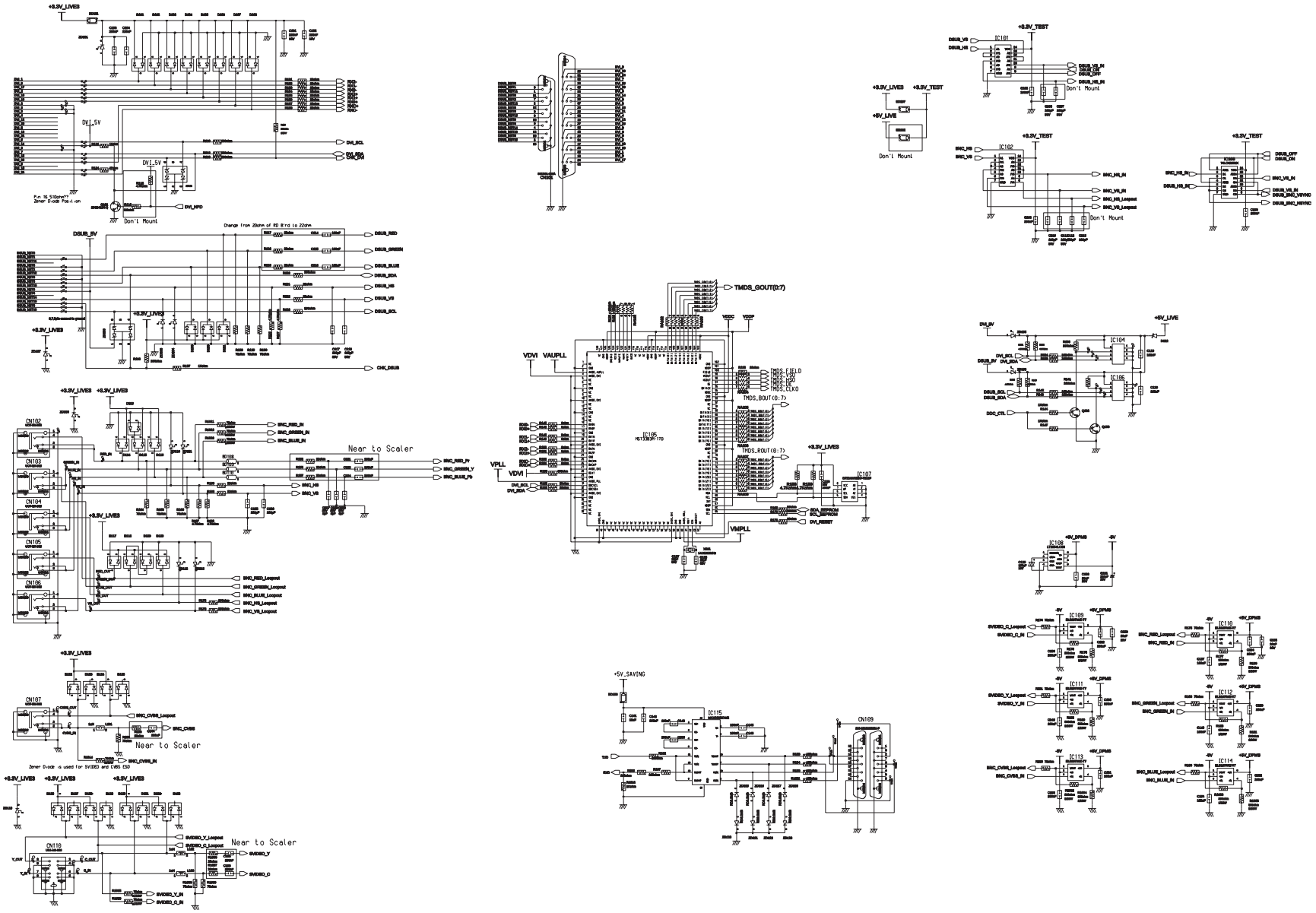
10	9	8	7	6	5	4	3	2	1
NWCTL	NWPWR	GND	12VNW	12VNW	GND	GND	GND	5VPOD	5VPOD

1	+5V_USB	2	GND	41	GND	42	+12V_NW
3	+5V_USB	4	GND	43	GND	44	+12V_NW
5	+5V_NW	6	GND	45	GND	46	NW_OUTL
7	+5V_NW	8	GND	47	GND	48	NW_OUTR
9	+5V_LIVE	10	GND	49	GND	50	DGG
11	+5V_LIVE	12	+5V_STANDBY	51	GND	52	DGG
13	FPDHS	14	FPDVS	53	GND	54	DGG
15	FPDCLK	16	NW_POWER_CTL	55	GND	56	DGG
17	WAKE_LAN	18	PW_BN	57	GND	58	DGG
19	SLC_3	20	SDA_3	59	GND	60	DGG
21	GND	22	NW_2_MON	61	GND	62	DGG
23	MON_2_NW	24	GND	63	GND	64	DGG
25	DRR	26	GND	65	GND	66	DBB
27	DRR	28	GND	67	GND	68	DBB
29	DRR	30	GND	69	GND	70	DBB
31	DRR	32	GND	71	GND	72	DBB
33	DRR	34	GND	73	GND	74	DBB
35	DRR	36	GND	75	GND	76	DBB
37	DRR	38	GND	77	GND	78	DBB
39	DRR	40	GND	79	GND	80	DBB

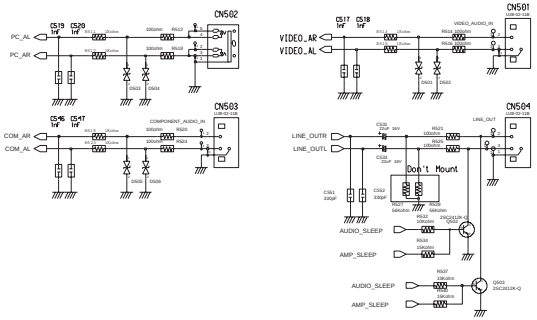
9 Schematic Diagram

-This Document can not be used without Samsung ' s authorization.

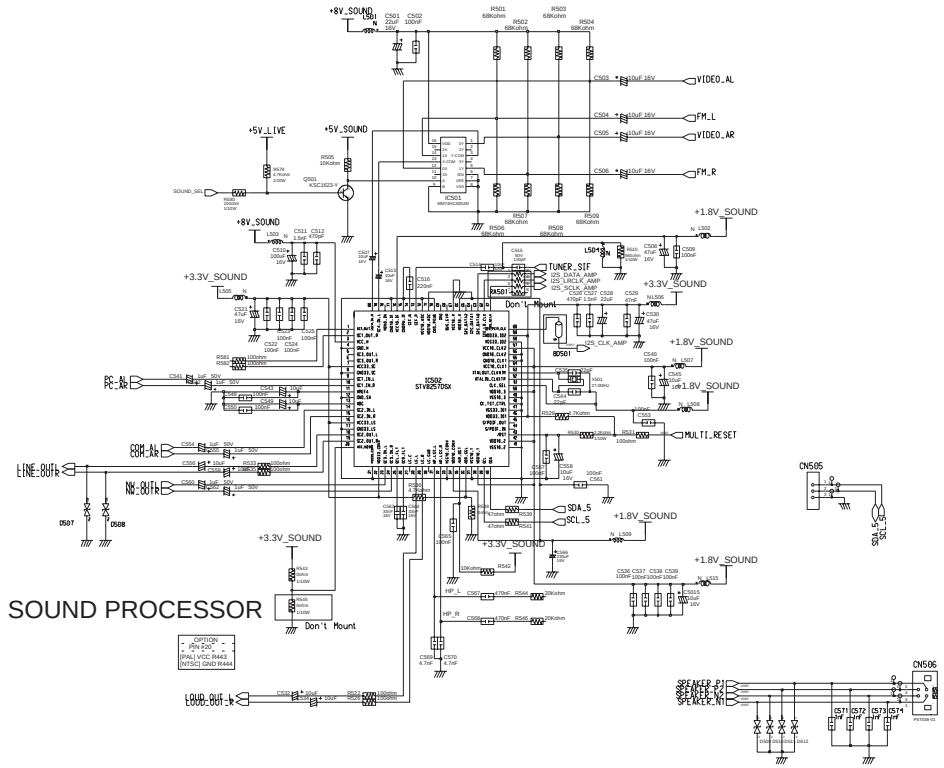
9-1 Main board Schematics Diagram(Signal input)



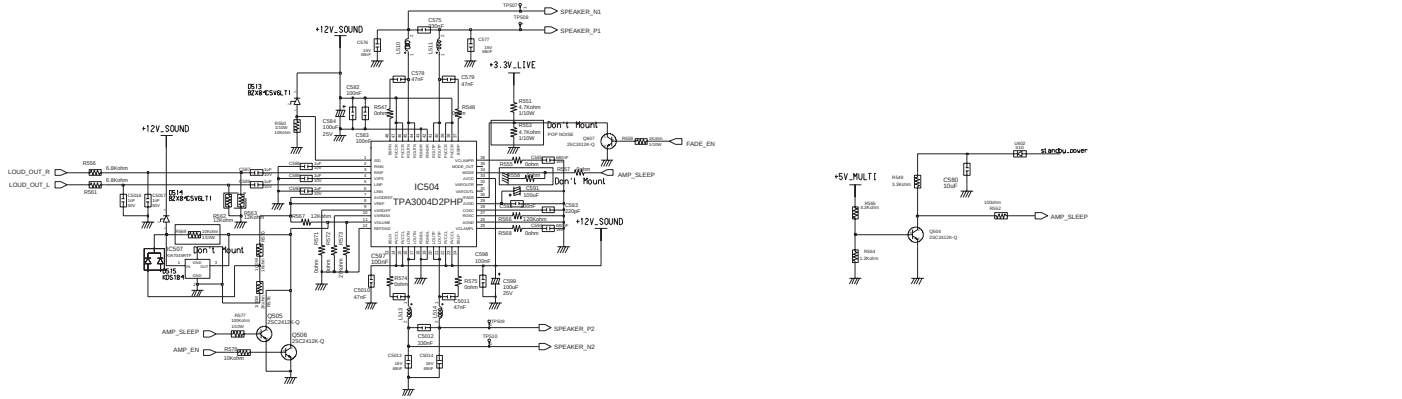
9-2 Main board Schematics Diagram(SOUND)



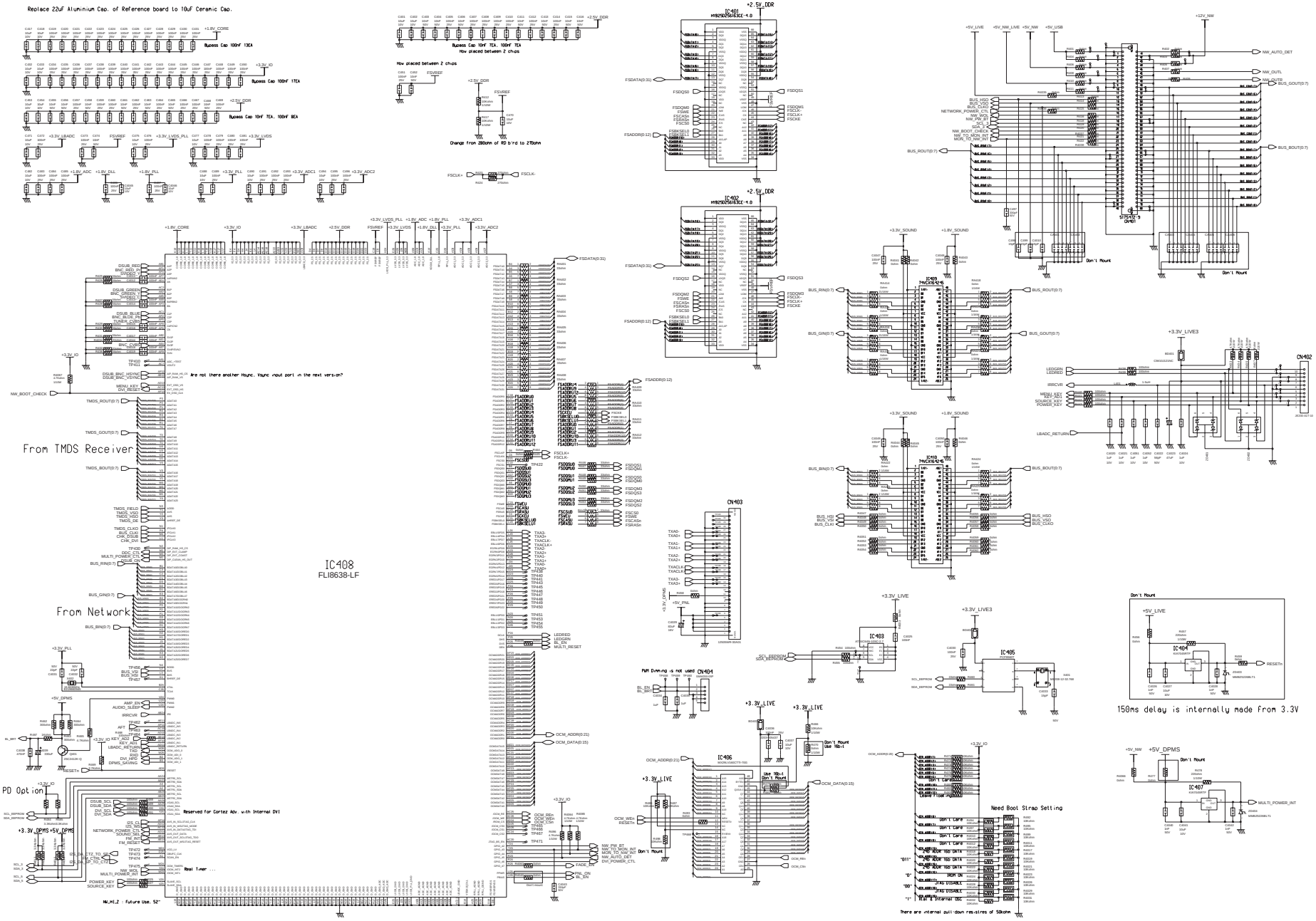
SOUND PROCESSOR



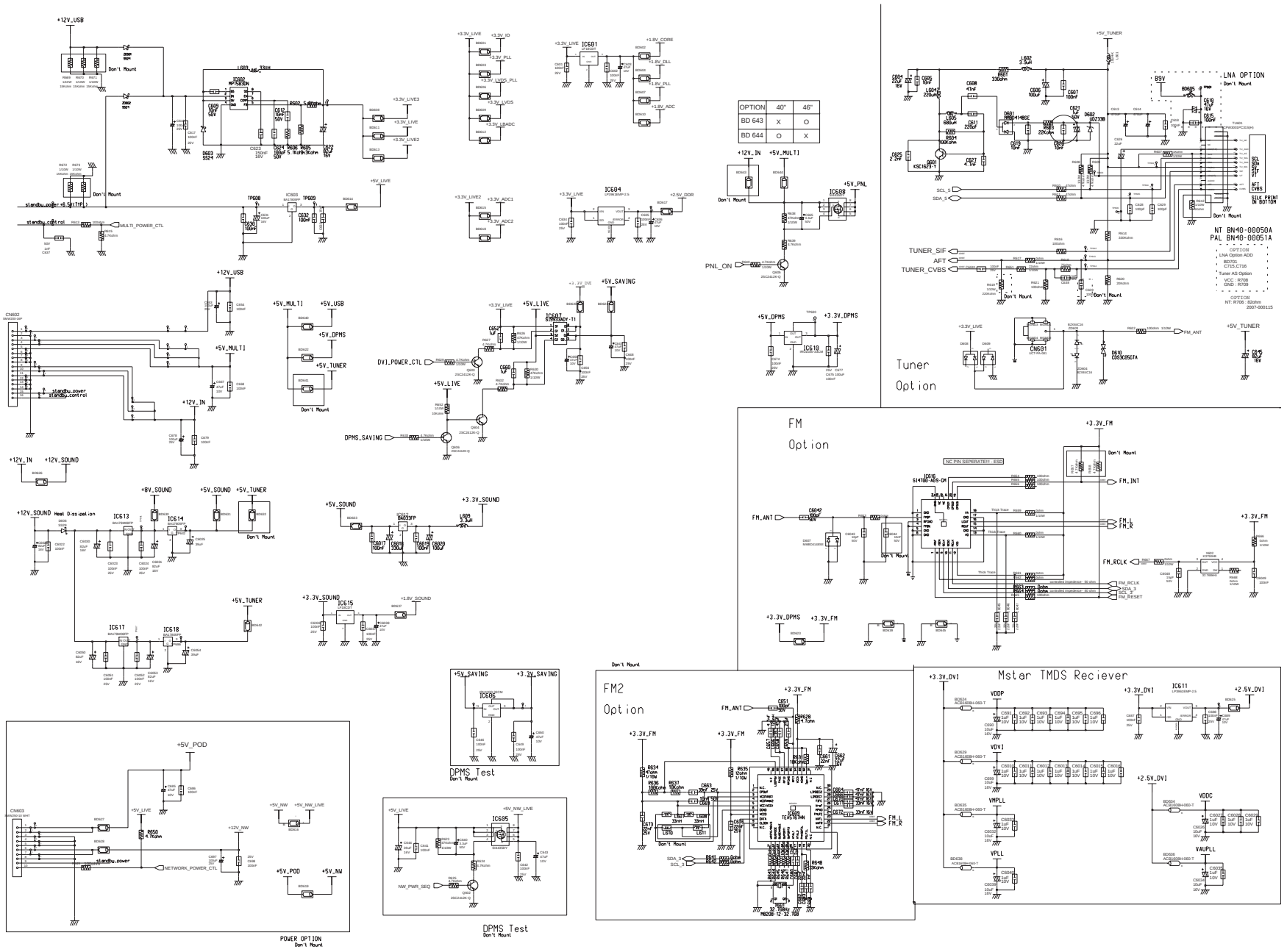
SOUND AMP



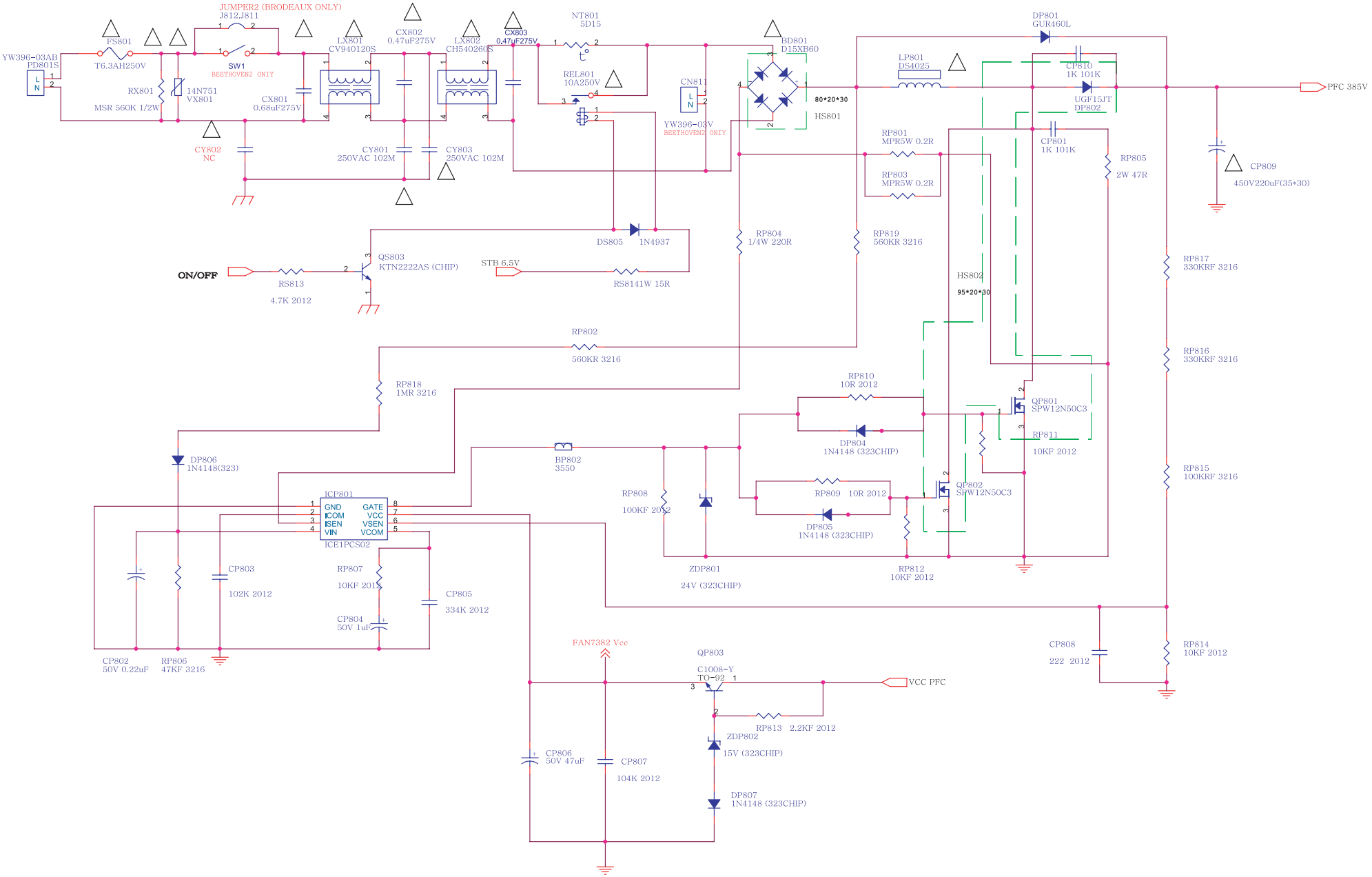
9-3 Main board Schematics Diagram(SCALER)



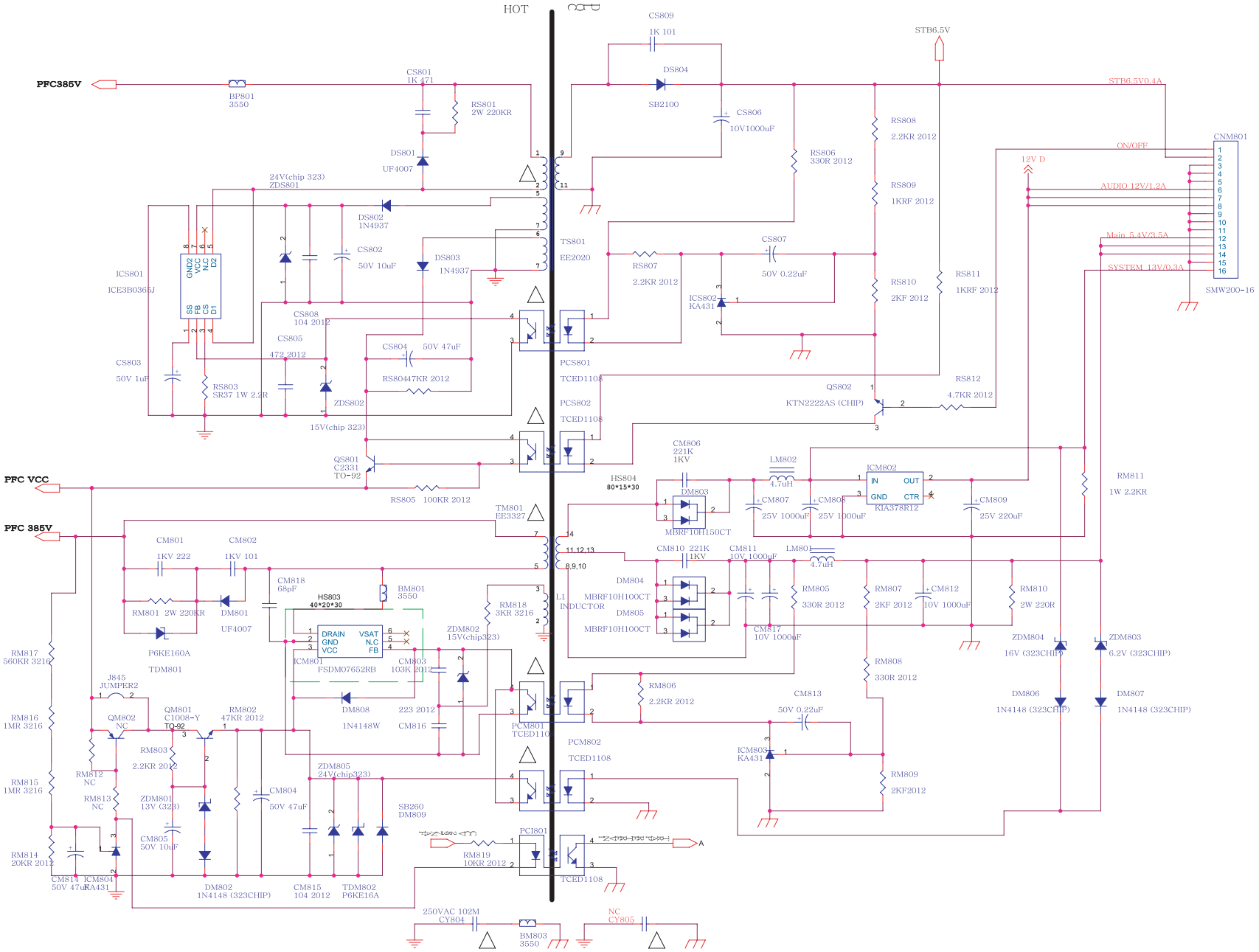
9-4 Main board Schematics Diagram(Power & Tuner Option)



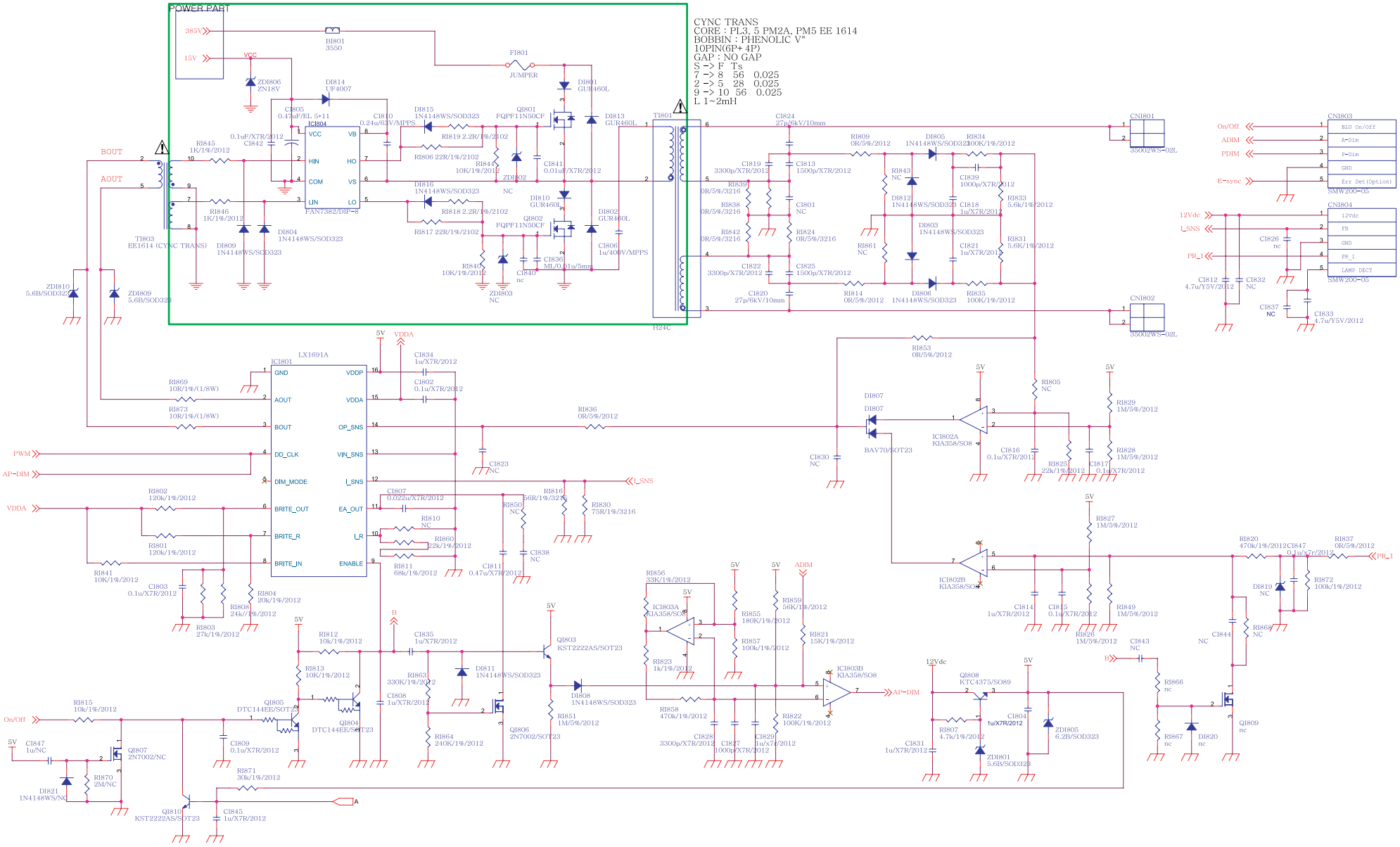
9-5 IP board Schematics Diagram(1)



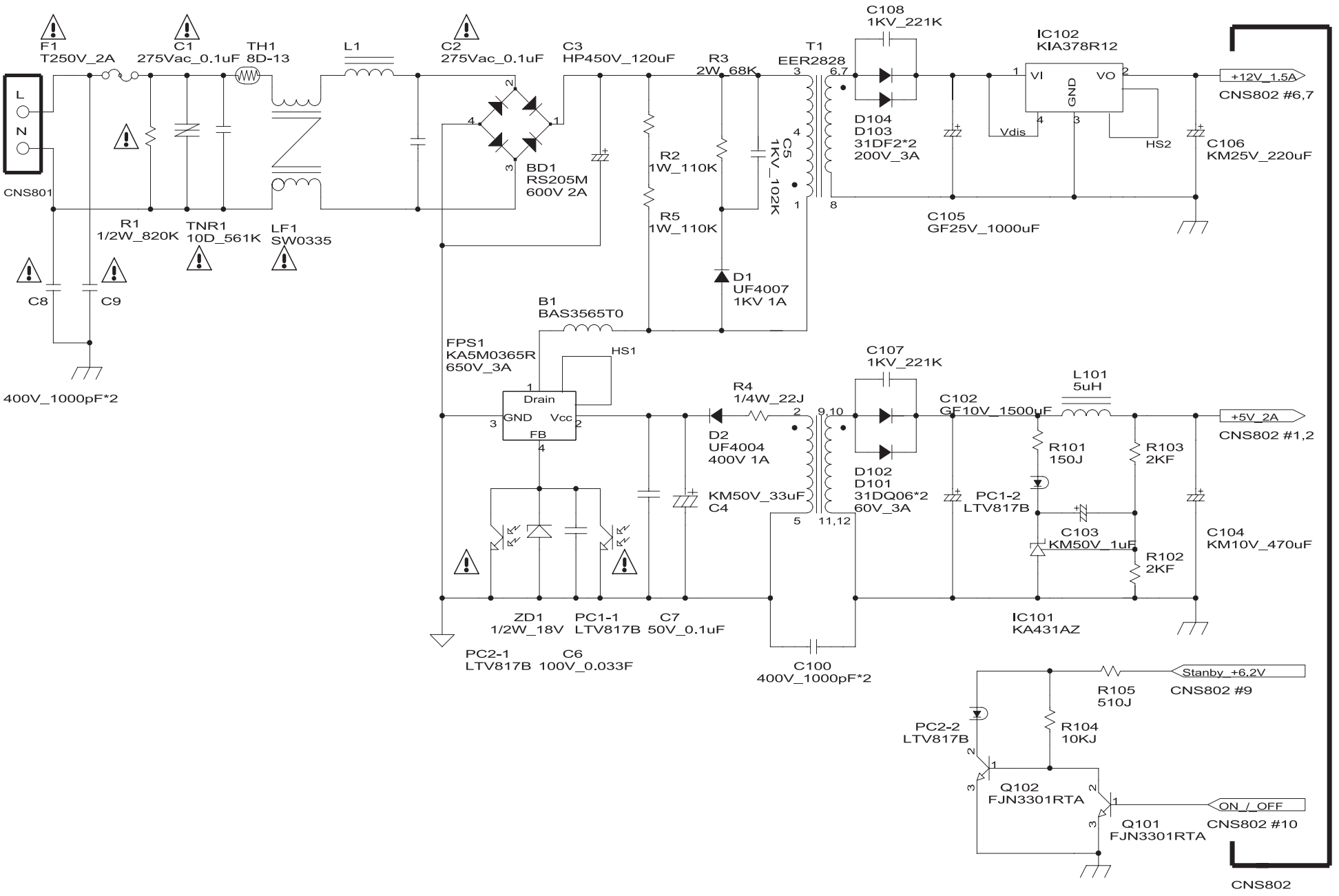
9-6 IP board Schematics Diagram(2)



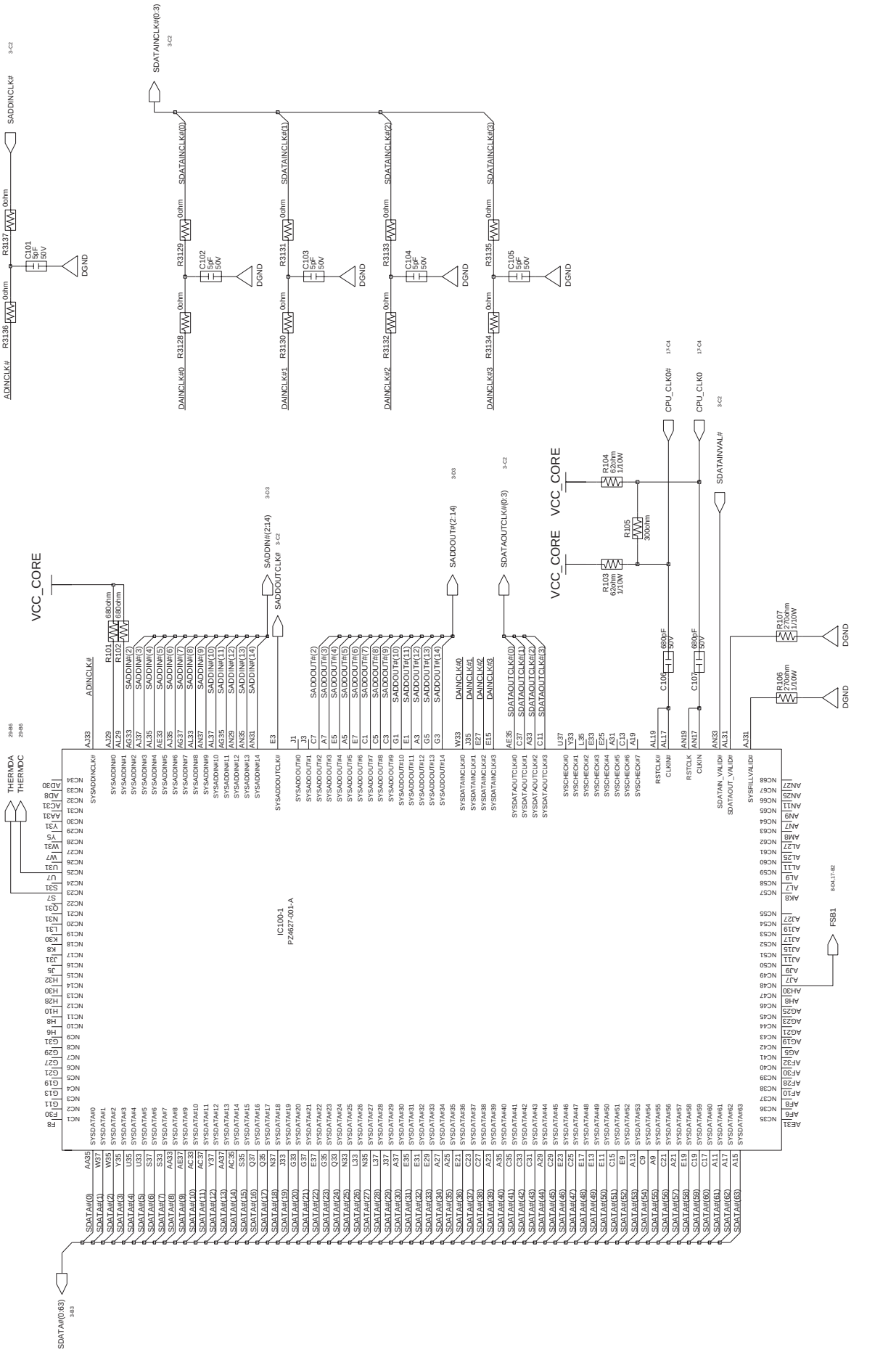
9-7 IP board Schematics Diagram(2)

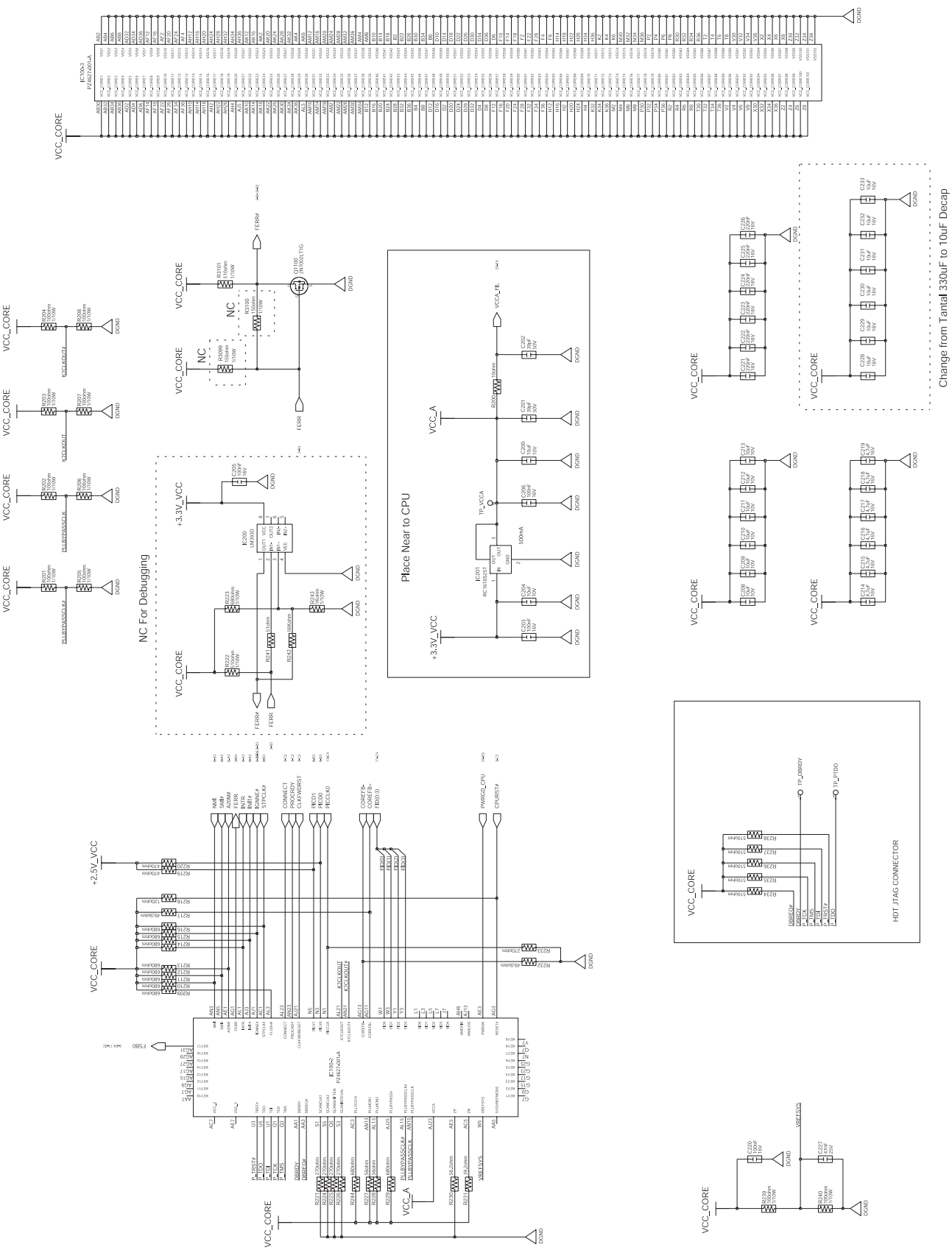


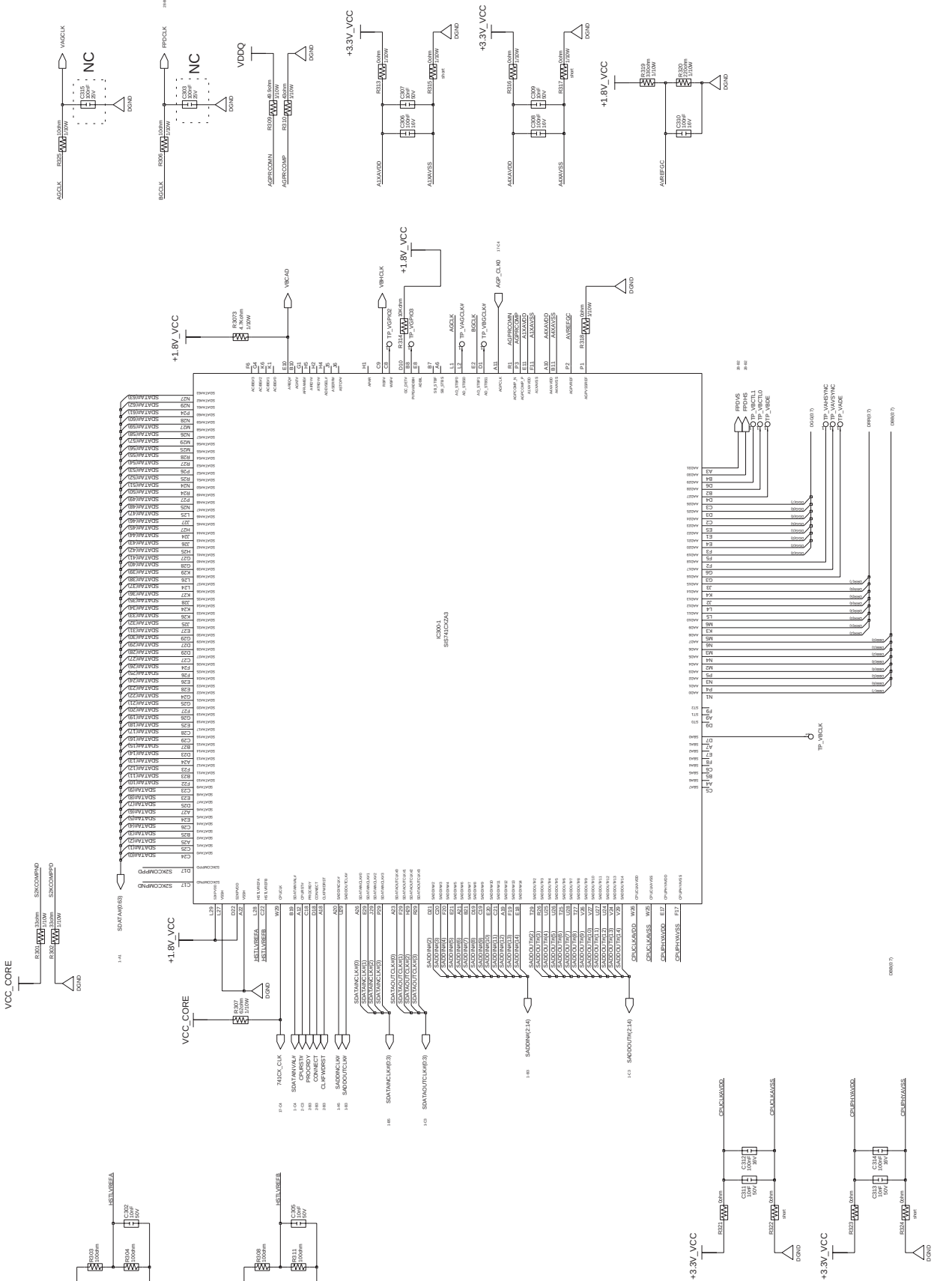
9-8 Sub power Schematics Diagram

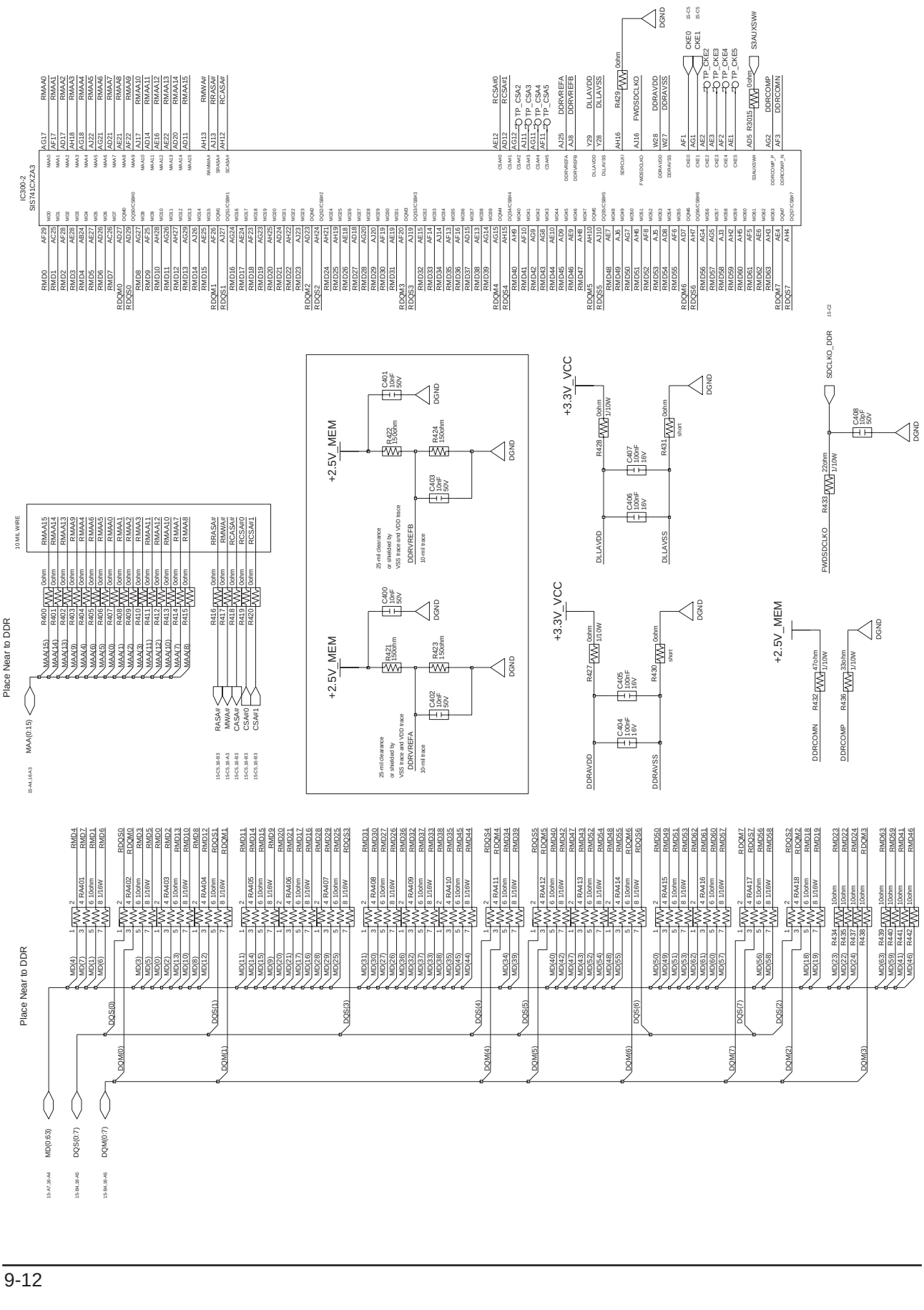


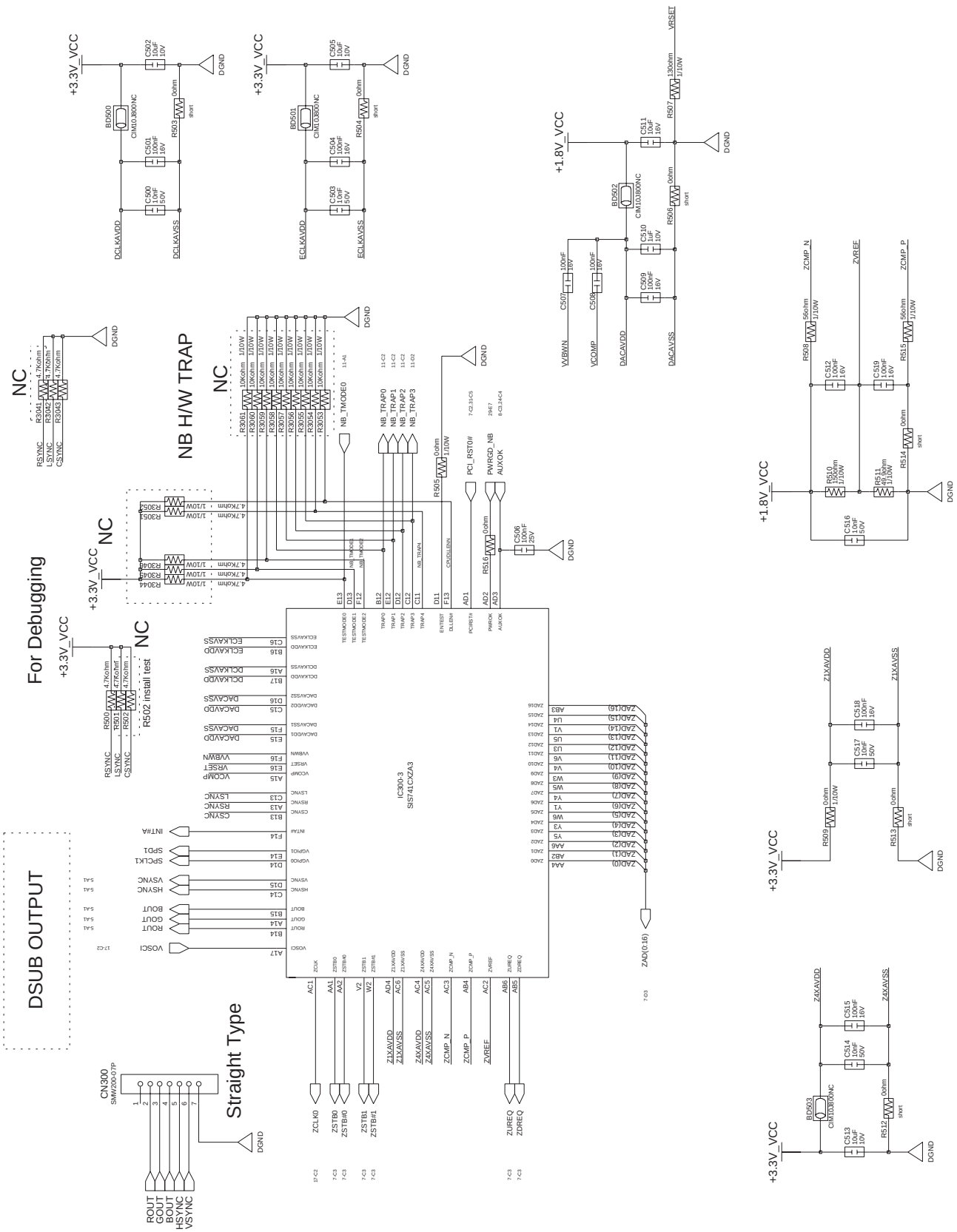
9-9 NETWORK Schematics Diagram(1)

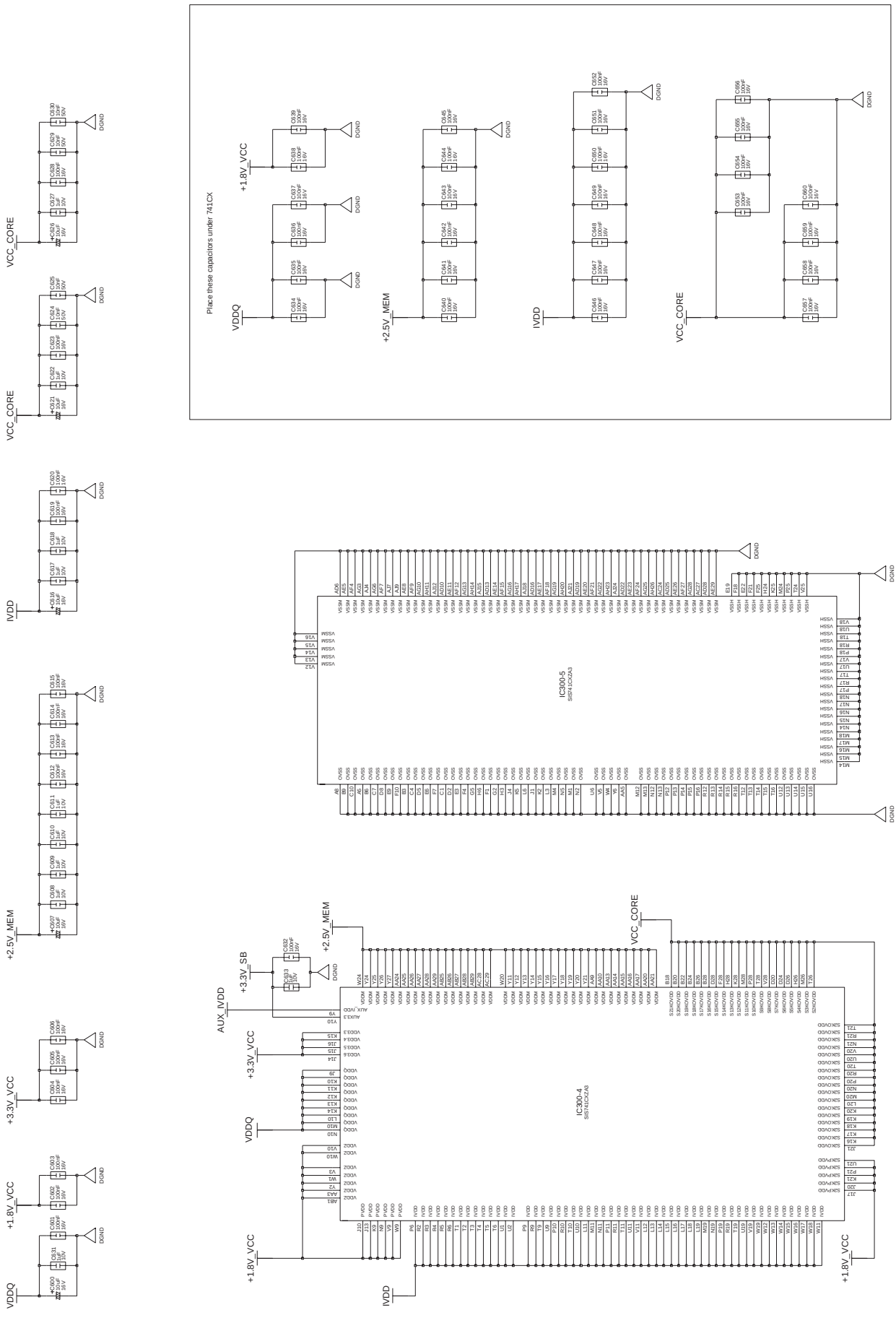


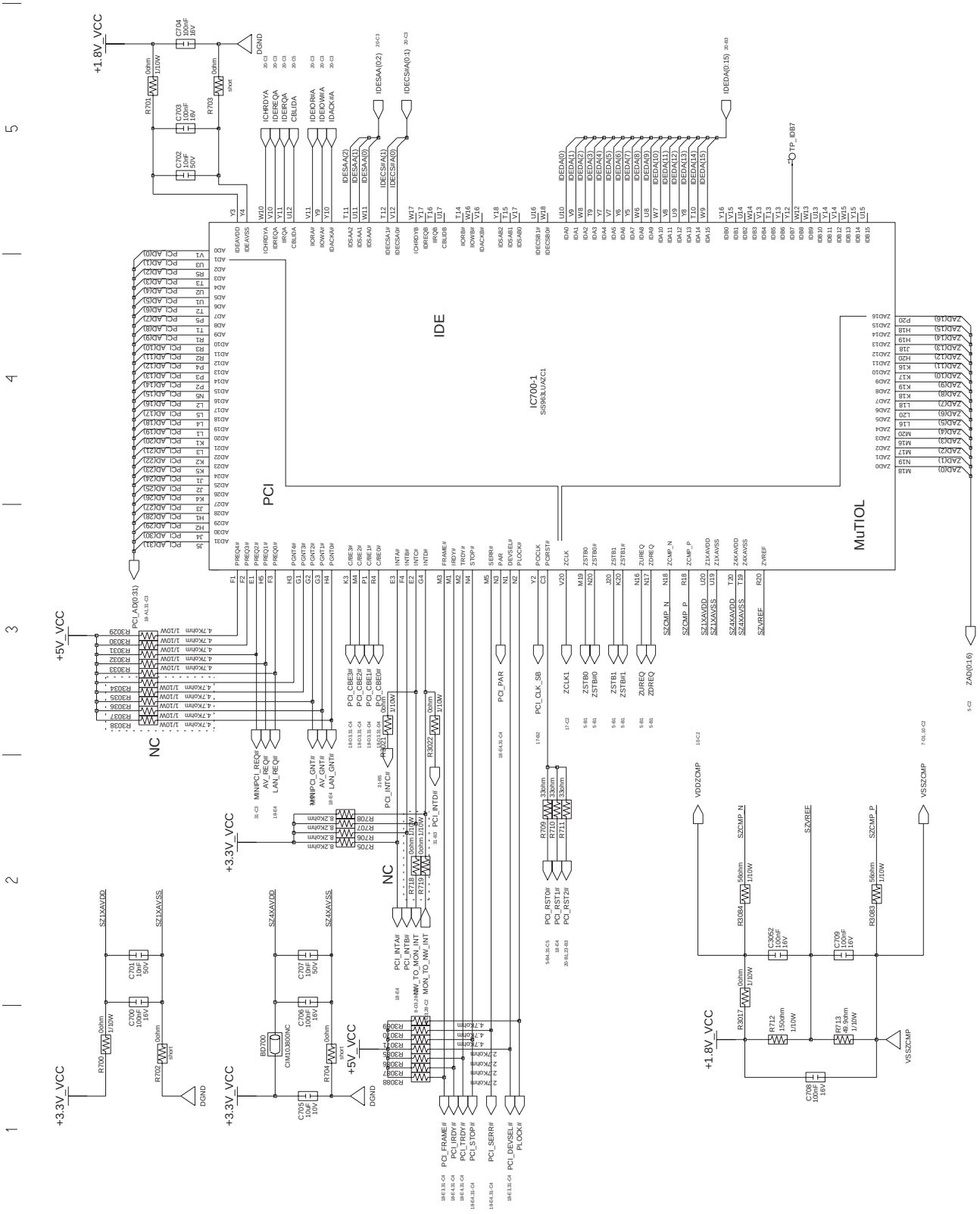

NC For Debugging
Place Near to CPU
HDT JTAG CONNECTOR
Change from Tantal 330uF to 10uF Decap
VCC_CORE
DGND
+3.3V_VCC
VCC_A
+2.5V_VCC

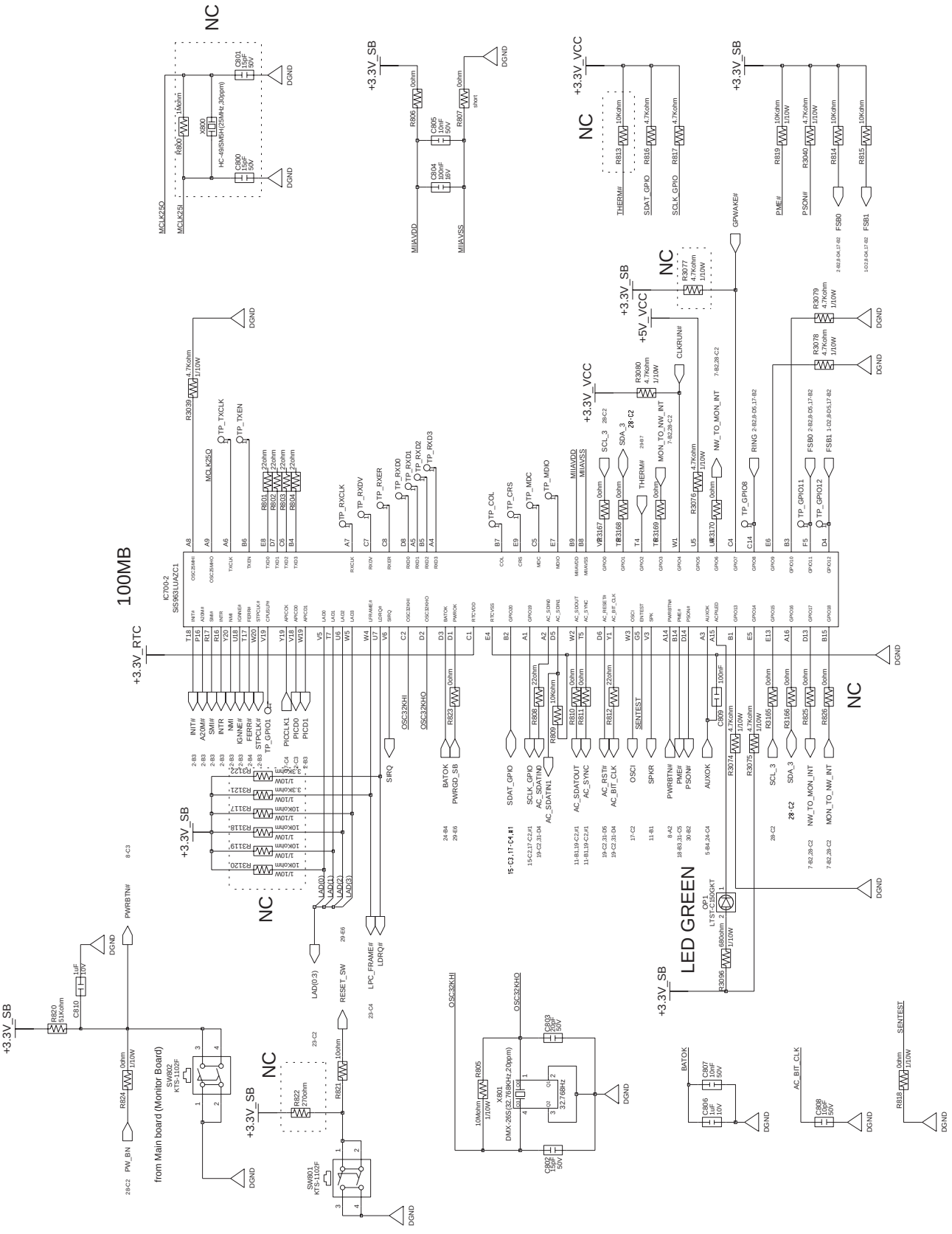


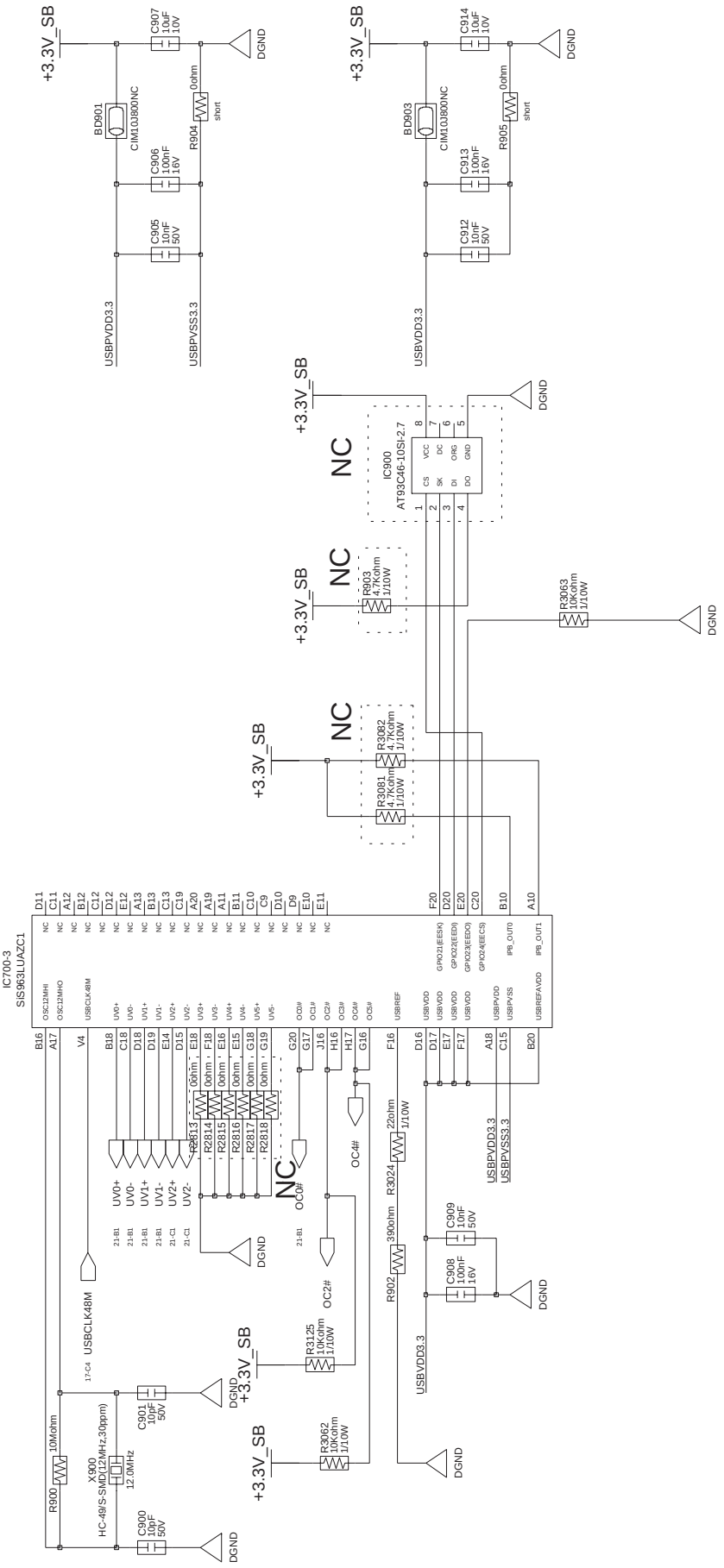


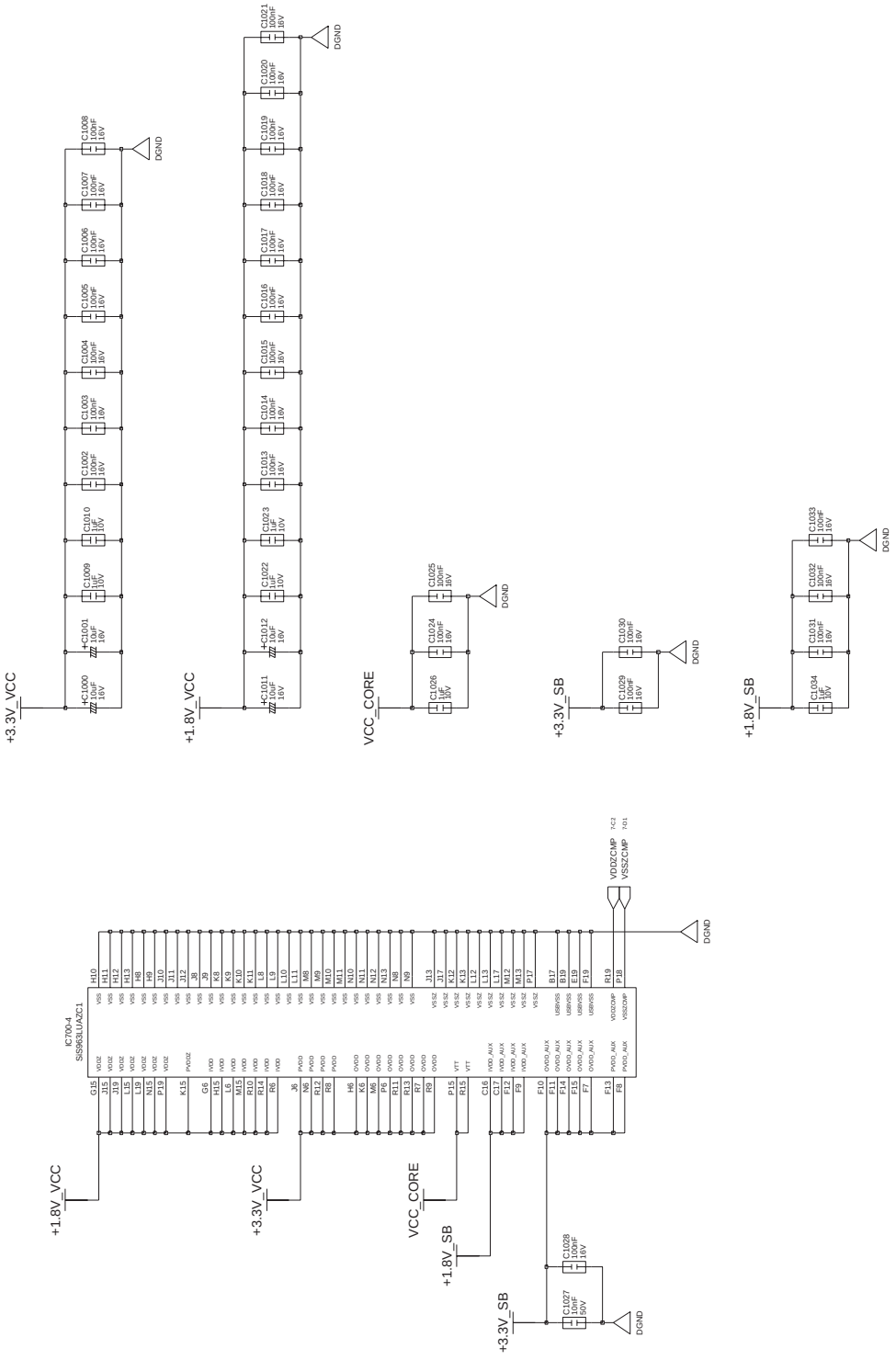

DSUB OUTPUT
For Debugging
R502 install test
NC
NB H/W TRAP
Straight Type
CN300
SMW200-07P
ROUT
GOUT
BOUT
HSYNC
VSYNC
DGND
+3.3V_VCC
+1.8V_VCC
IC300-3
SIS741CXA3
DCLKAVDD
DCLKAVSS
ECLKAVDD
ECLKAVSS
DACAVDD
DACAVSS
Z1XAVDD
Z1XAVSS
Z4XAVDD
Z4XAVSS
ZCLK0
ZSTB0
ZSTB#0
ZSTB1
ZSTB#1
ZCMP_N
ZCMP_P
ZVREF
ZUREQ
ZDREQ
ZAD(0:16)
PCI_RST0#
PWRGD_NB
AUXOK
NB_TRAP0
NB_TRAP1
NB_TRAP2
NB_TRAP3
NB_TMODE0
VCOMP
VRSET
VWBWN
RSYNC
LSYNC
CSYNC

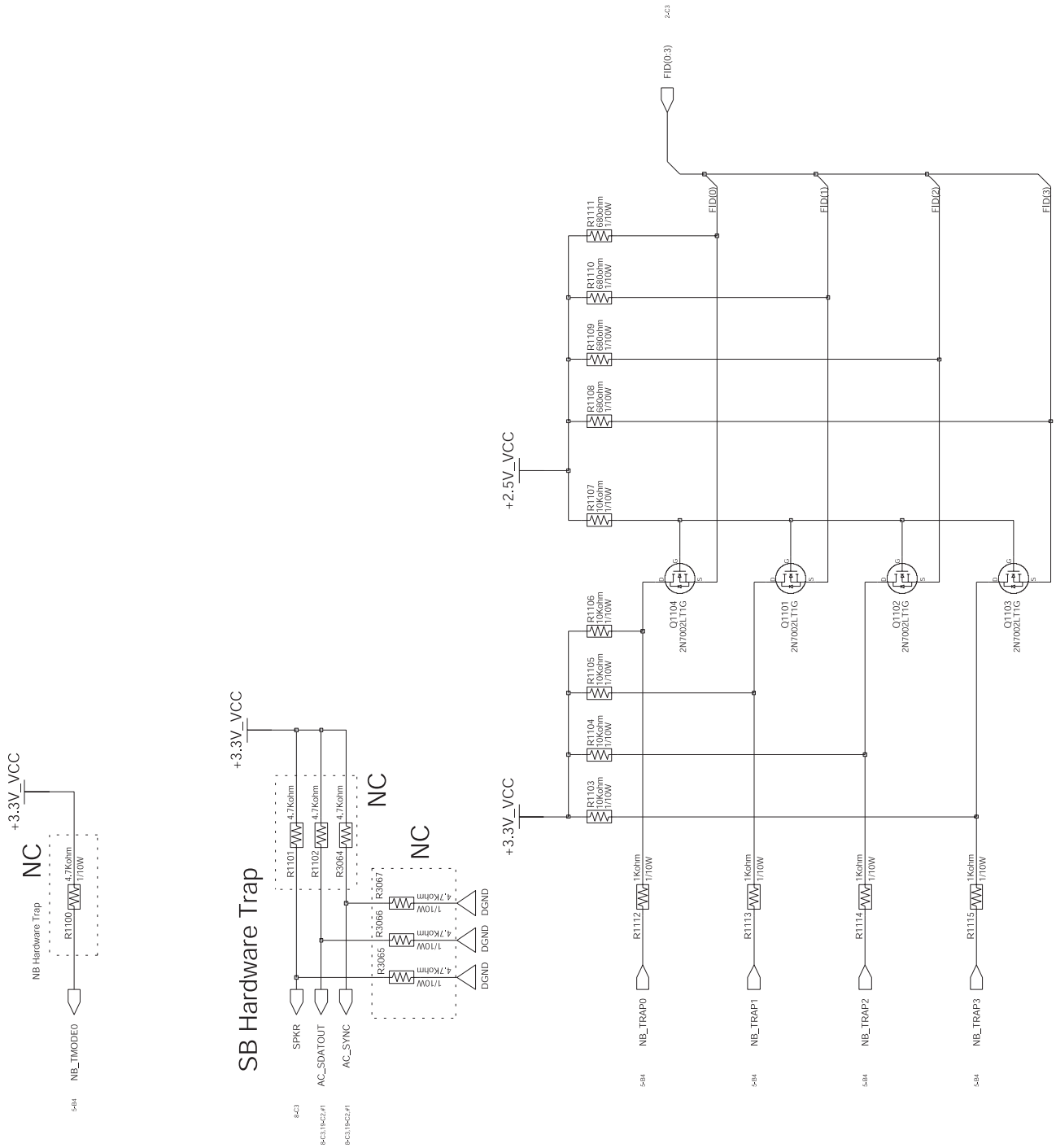

Place these capacitors under 741CX
VDDQ
+1.8V_VCC
+2.5V_MEM
IVDD
VCC_CORE
DGND
IC300-5
SIS741CX/ZA3
IC300-4
SIS741CX/ZA3
AUX_IVDD
+3.3V_SB
+3.3V_VCC

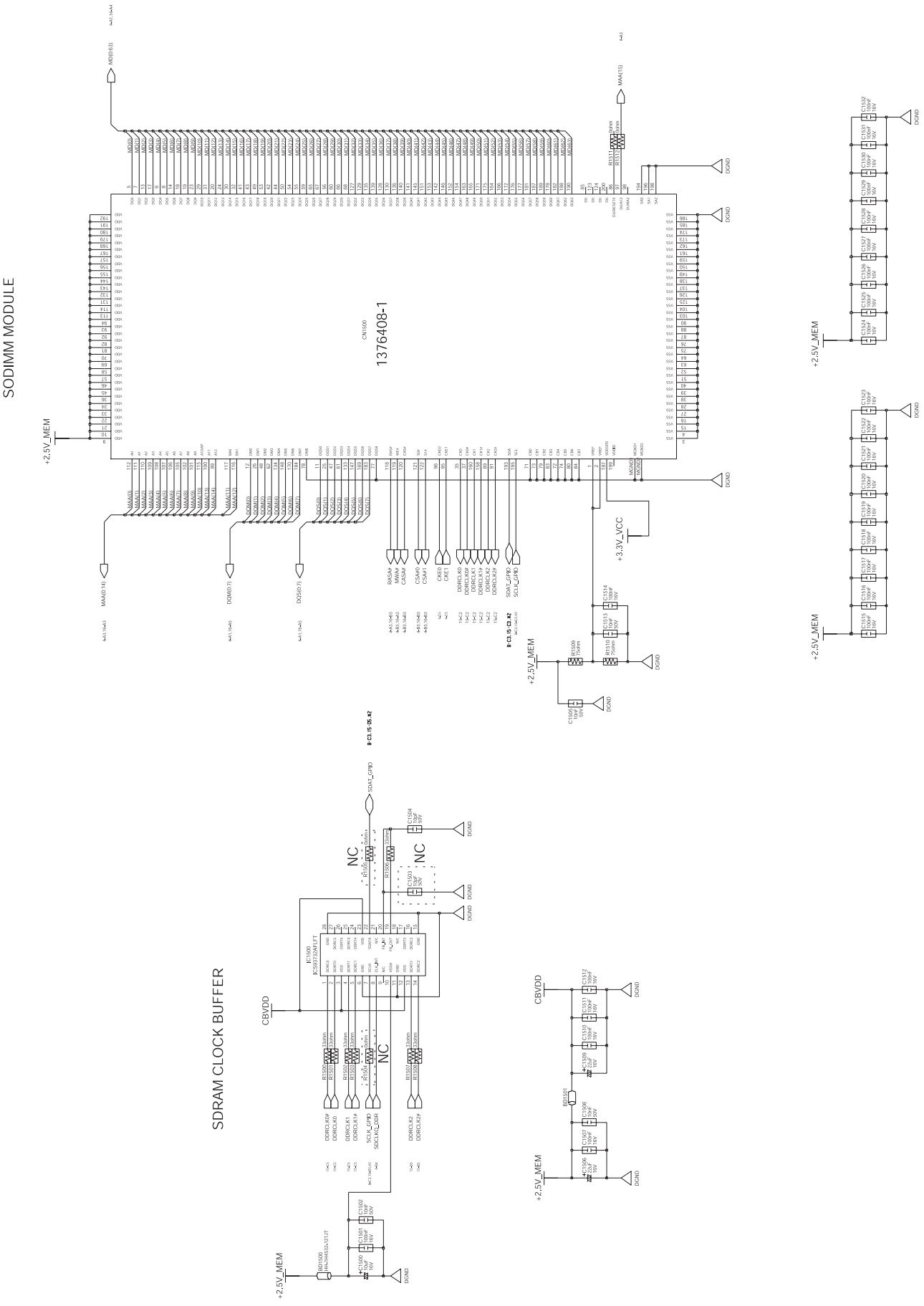

IC700-1
SiS963LU/CC1
PCI
IDE
MuTIOL
NC
+1.8V_VCC
+5V_VCC
+3.3V_VCC
DGND
VDDZCMP
VSSZCMP
SZVREF
SZCMP_N
SZCMP_P
PCI_CLK_SB
PCI_PAR
PCI_FRAME#
PCI_IRDY#
PCI_TRDY#
PCI_STOP#
PCI_SERR#
PCI_DEVSEL#
PCI_PLOCK#
ZCLK1
ZSTB0
ZSTB0#
ZSTB1
ZSTB1#
ZURREQ
ZDRREQ
IDEDA(0:15)
IDESAA(0:2)
IDECSIA(0:1)
ZAD(0:16)
TP_IDB7

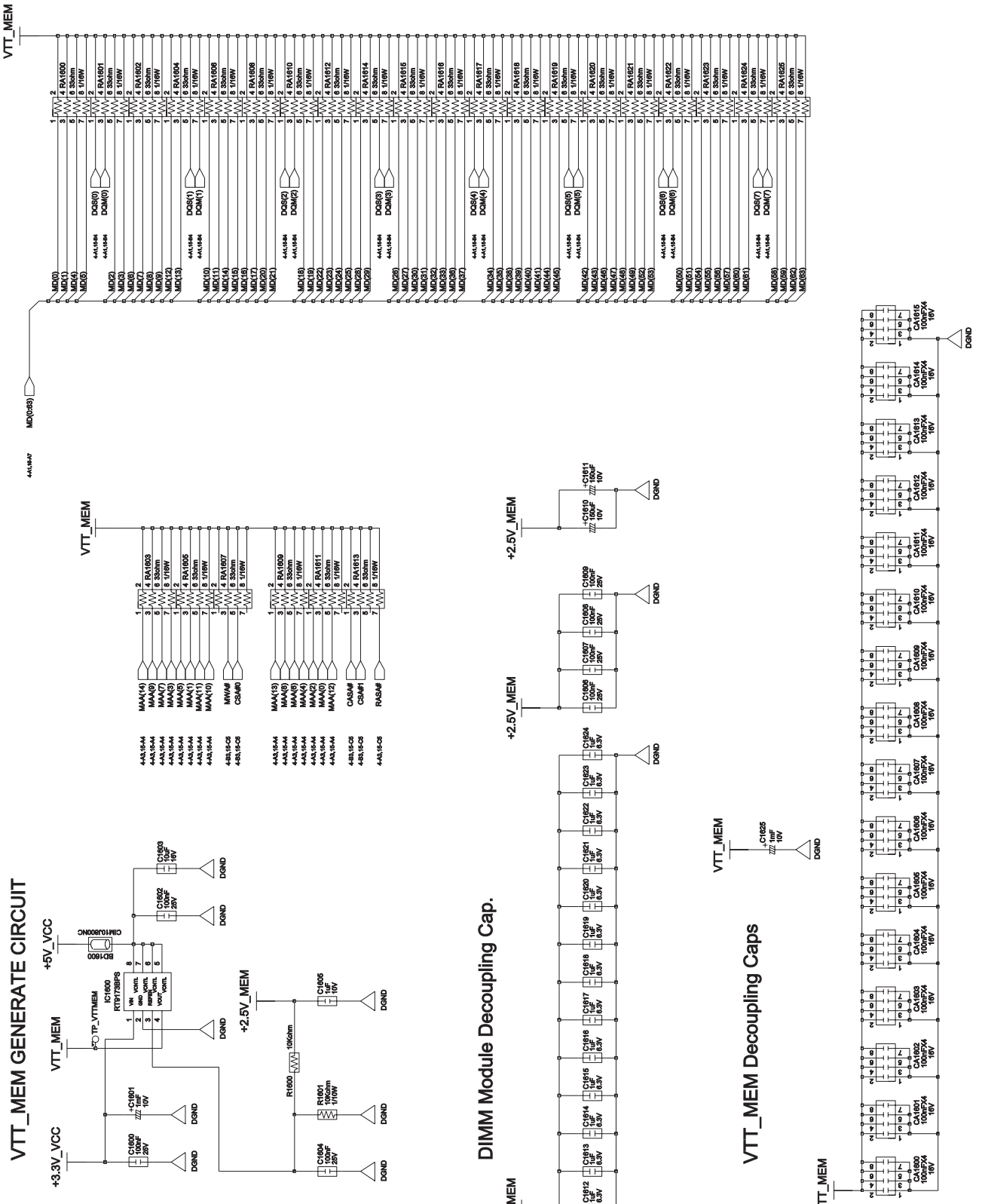

100MB
IC700-2
SIS963LUAZC1
+3.3V_RTC
+3.3V_SB
+5V_VCC
+3.3V_VCC
DGND
NC
LED GREEN
from Main board (Monitor Board)
MCLK25O
MCLK25I
MIIAVDD
MIIAVSS
TP_TXCLK
TP_TXEN
TP_RXCLK
TP_RXDV
TP_RXER
TP_RXD0
TP_RXD1
TP_RXD2
TP_RXD3
TP_COL
TP_CRS
TP_MDC
TP_MDIO
INIT#
A20M#
SMI#
INTR
NMI
IGNNE#
FERR#
STPCLK#
TP_GPIO1
PICCLK1
PICD0
PICD1
SIRQ
OSC32KHI
OSC32KHO
BATOK
PWRGD_SB
SDAT_GPIO
SCLK_GPIO
AC_SDATIN0
AC_SDATIN1
AC_SDATOUT
AC_SYNC
AC_RST#
AC_BIT_CLK
OSCI
SPKR
PWRBTN#
PME#
PSON#
AUXOK
SCL_3
SDA_3
NW_TO_MON_INT
MON_TO_NW_INT
THERM#
CLKRUN#
RING
TP_GPIO8
TP_GPIO11
TP_GPIO12
FSB0
FSB1
GPWAKE#
PME#
PSON#
SDAT_GPIO
SCLK_GPIO
LAD(0:3)
LPC_FRAME#
LDRQ#
RESET_SW
PWRBTN#
PW_BN
SENTEST
AC_BIT_CLK
SW801
SW802
X801
X800
OP1
LTST-C150GKT

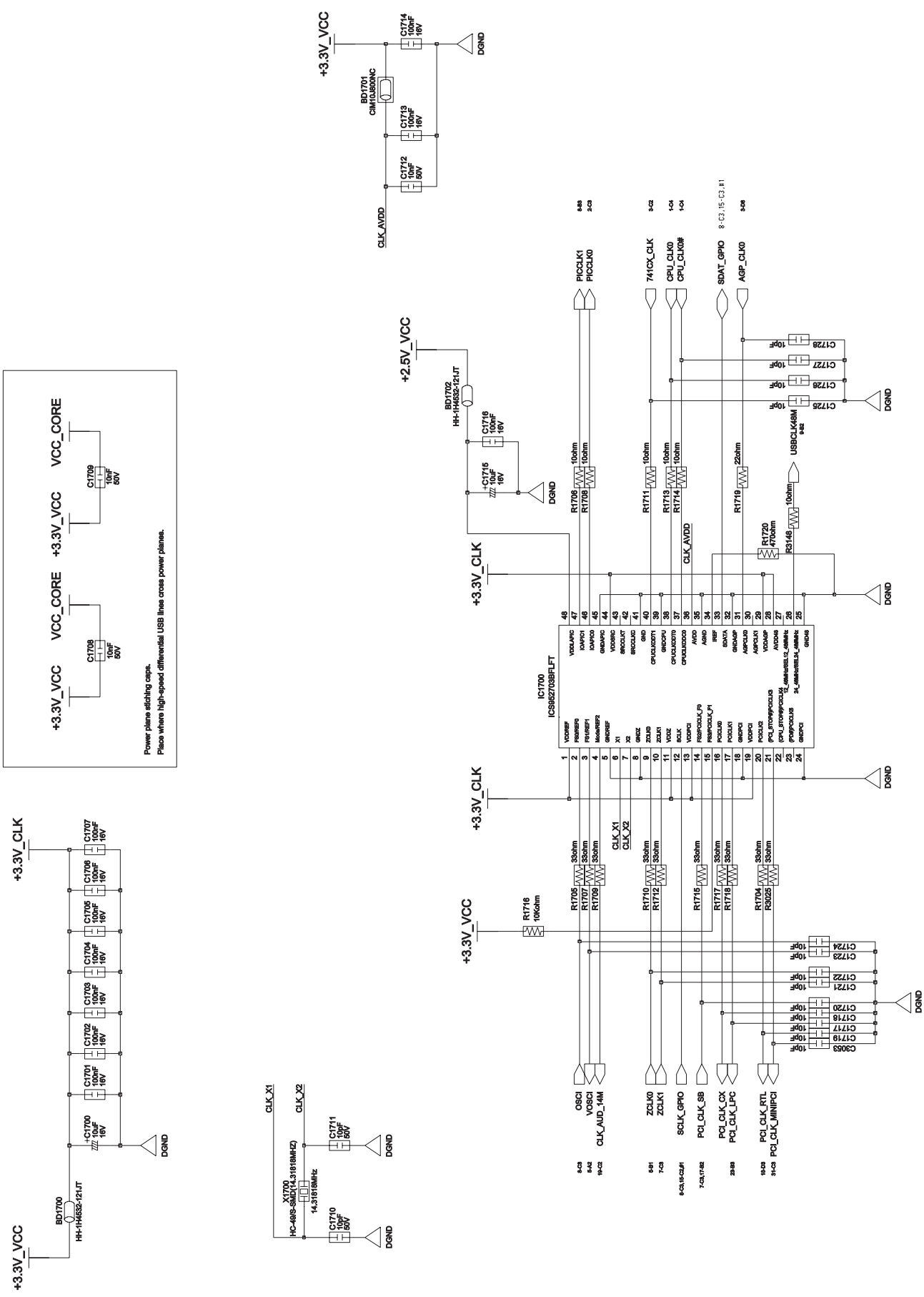

IC700-3
SIS963LUAZC1
USBCLK48M
X900
HC-49/S-SMD(12MHz,30ppm)
12.0MHz
R900 10Mohm
C900 10pF 50V
C901 10pF 50V
R3125 10Kohm 1/10W
R3062 10Kohm 1/10W
R902 390ohm
R3024 22ohm 1/10W
C908 100nF 16V
C909 10nF 50V
R2813 0ohm
R2814 0ohm
R2815 0ohm
R2816 0ohm
R2817 0ohm
R2818 0ohm
UV0+
UV0-
UV1+
UV1-
UV2+
UV2-
OC0#
OC2#
OC4#
USBPVDD3.3
USBPVSS3.3
USBVDD3.3
+3.3V_SB
DGND
BD901 CIM1010800NC
C907 10uF 10V
C906 100nF 16V
C905 10nF 50V
R904 0ohm short
USBPVDD3.3
USBPVSS3.3
BD903 CIM1010800NC
C914 10uF 10V
C913 100nF 16V
C912 10nF 50V
R905 0ohm short
USBVDD3.3
NC
IC900
AT93C46-10SI-2.7
CS SK DI DO VCC ORG DC GND
R903 4.7Kohm 1/10W
R3082 4.7Kohm 1/10W
R3081 4.7Kohm 1/10W
R3063 10Kohm 1/10W

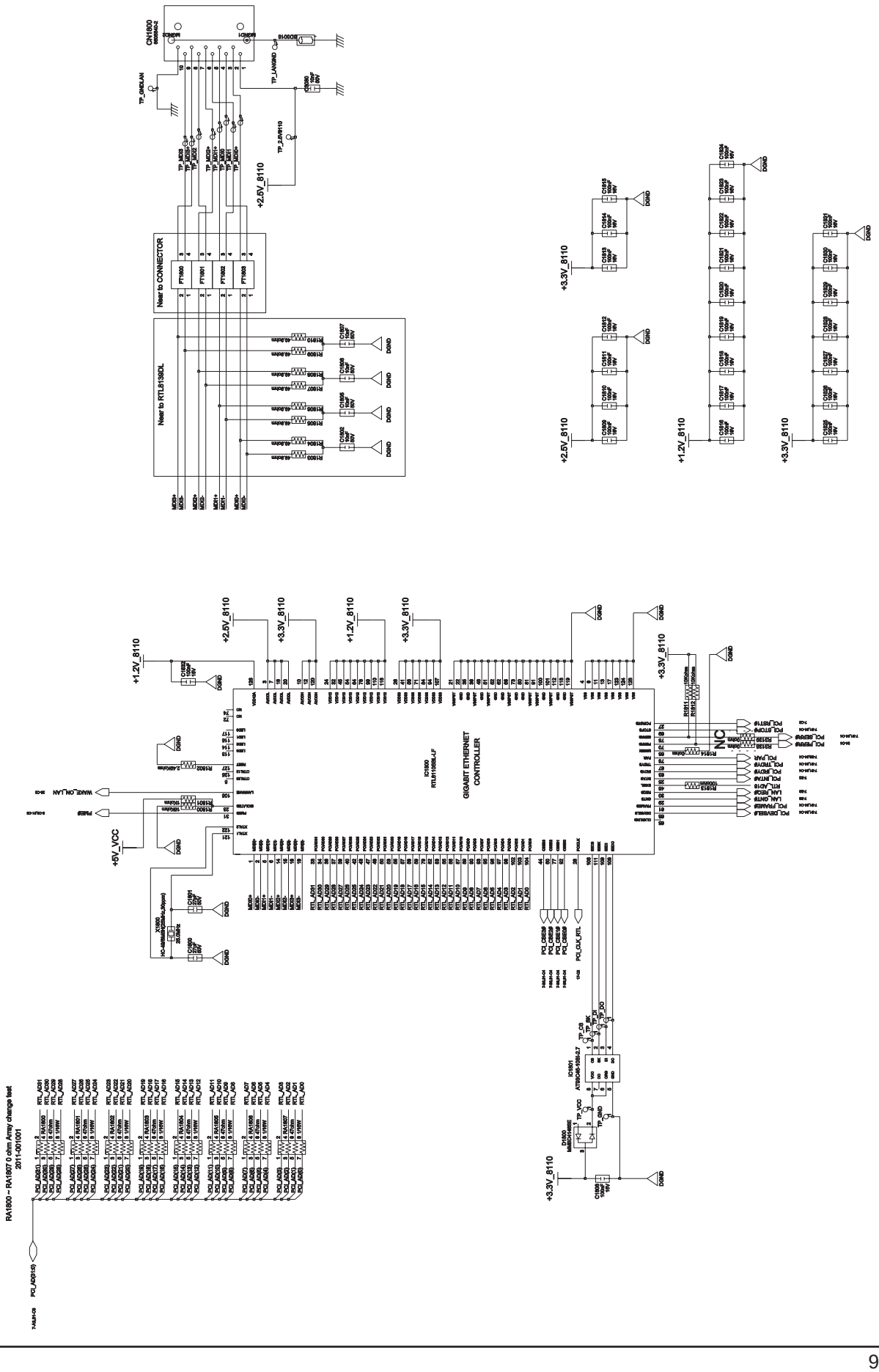

+3.3V_VCC
+1.8V_VCC
VCC_CORE
+3.3V_SB
+1.8V_SB
DGND
VDDZCMP
VSSZCMP
IC700-4
SS9863LUAZC1

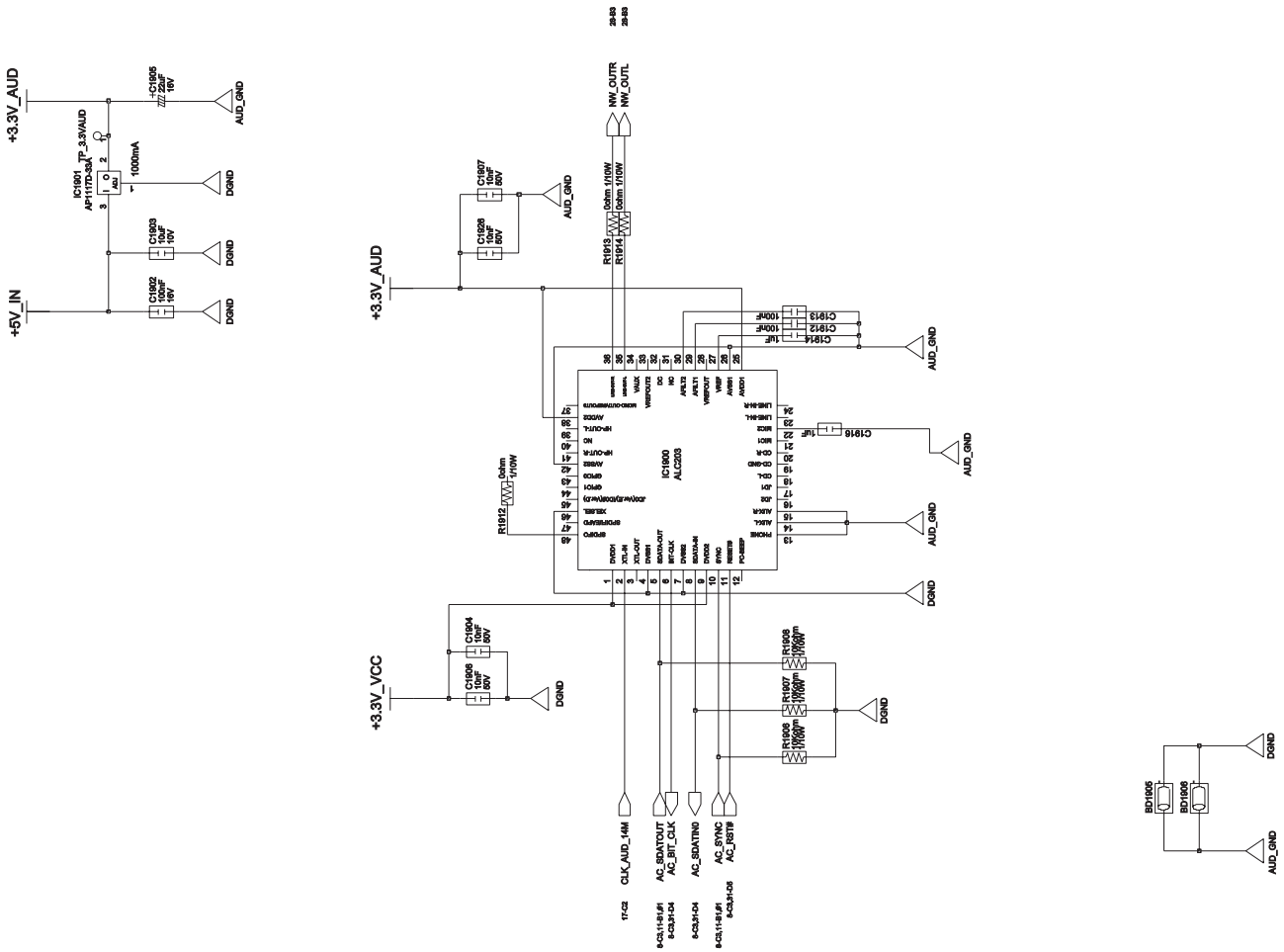

+3.3V_VCC
NC
NB Hardware Trap
R1100
4.7Kohm
1/10W
NB_TMODE0
5-84
SB Hardware Trap
+3.3V_VCC
SPKR
AC_SDATOUT
AC_SYNC
R1101
R1102
R3064
4.7Kohm
NC
NC
R3067
R3066
R3065
4.7Kohm
1/10W
DGND
8-4C3
8-4C3,11-4C2,4-1
8-4C3,11-4C2,4-1
+3.3V_VCC
+2.5V_VCC
R1103
R1104
R1105
R1106
R1107
10Kohm
1/10W
R1108
R1109
R1110
R1111
680ohm
1/10W
Q1104
Q1101
Q1102
Q1103
2N7002LT1G
R1112
R1113
R1114
R1115
1Kohm
1/10W
NB_TRAP0
NB_TRAP1
NB_TRAP2
NB_TRAP3
5-84
FID(0:3)
2-4C3
FID(0)
FID(1)
FID(2)
FID(3)

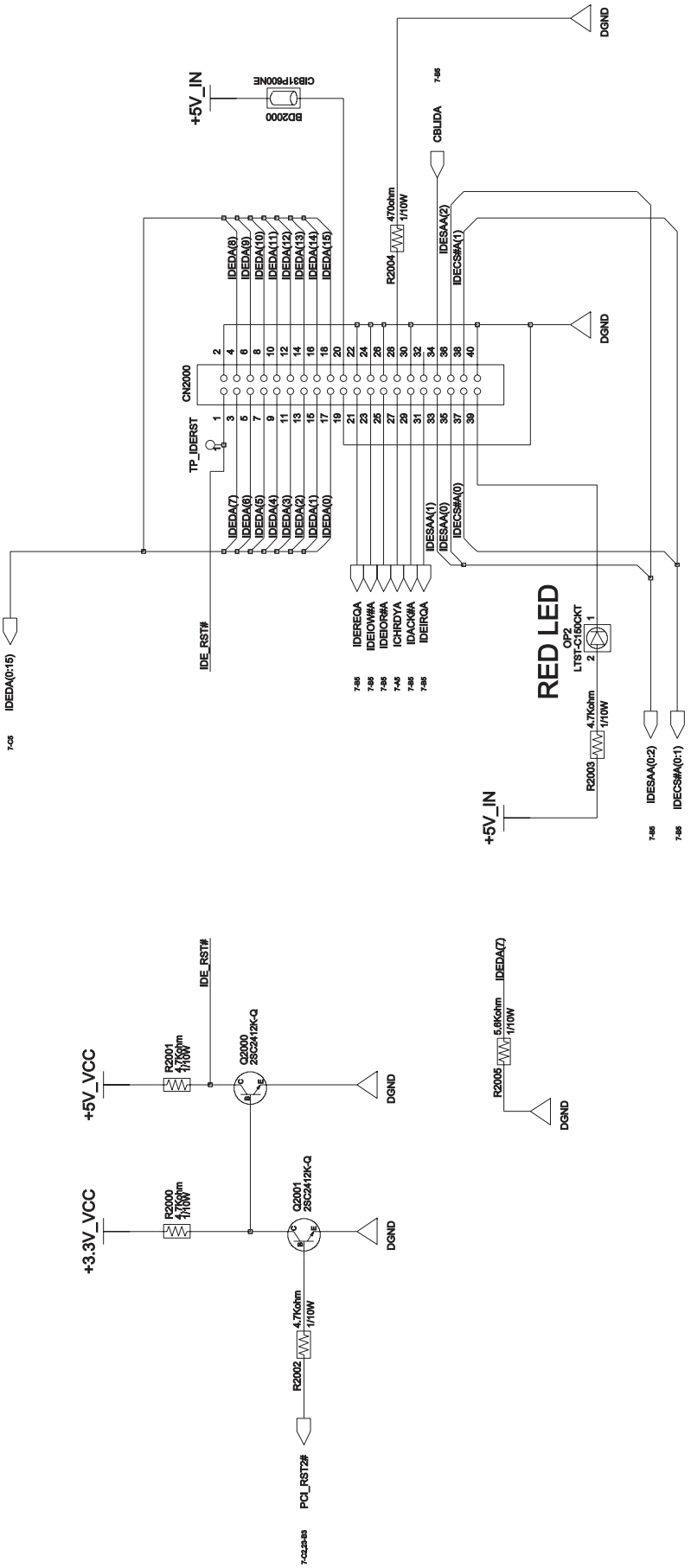

SODIMM MODULE
SDRAM CLOCK BUFFER
CN1500
1376408-1
+2.5V_MEM
DGND
+3.3V_VCC
CBVDD
NC

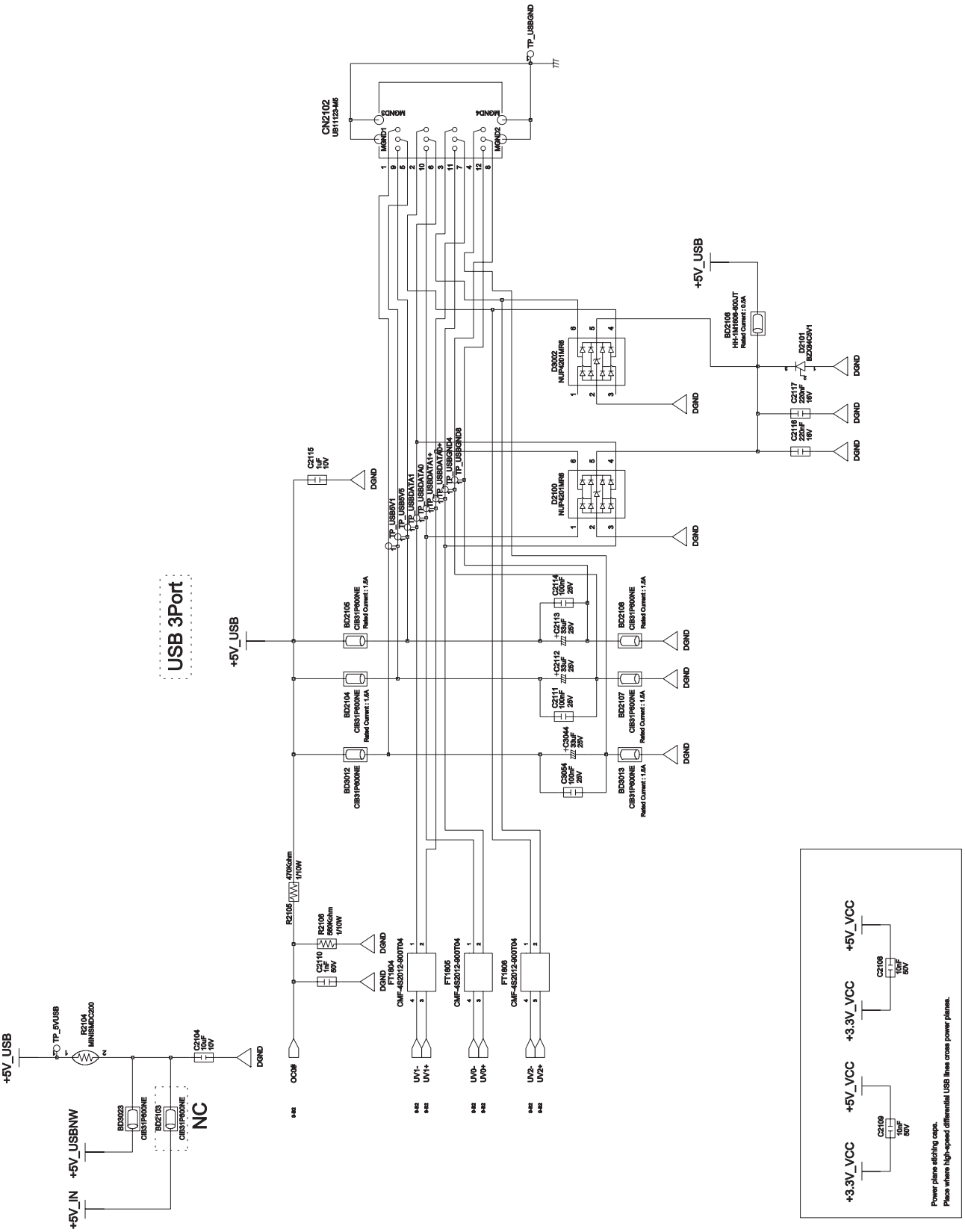

VTT_MEM GENERATE CIRCUIT
DIMM Module Decoupling Cap.
VTT_MEM Decoupling Caps
+3.3V_VCC
+5V_VCC
+2.5V_MEM
VTT_MEM
DGND
MD(0-63)

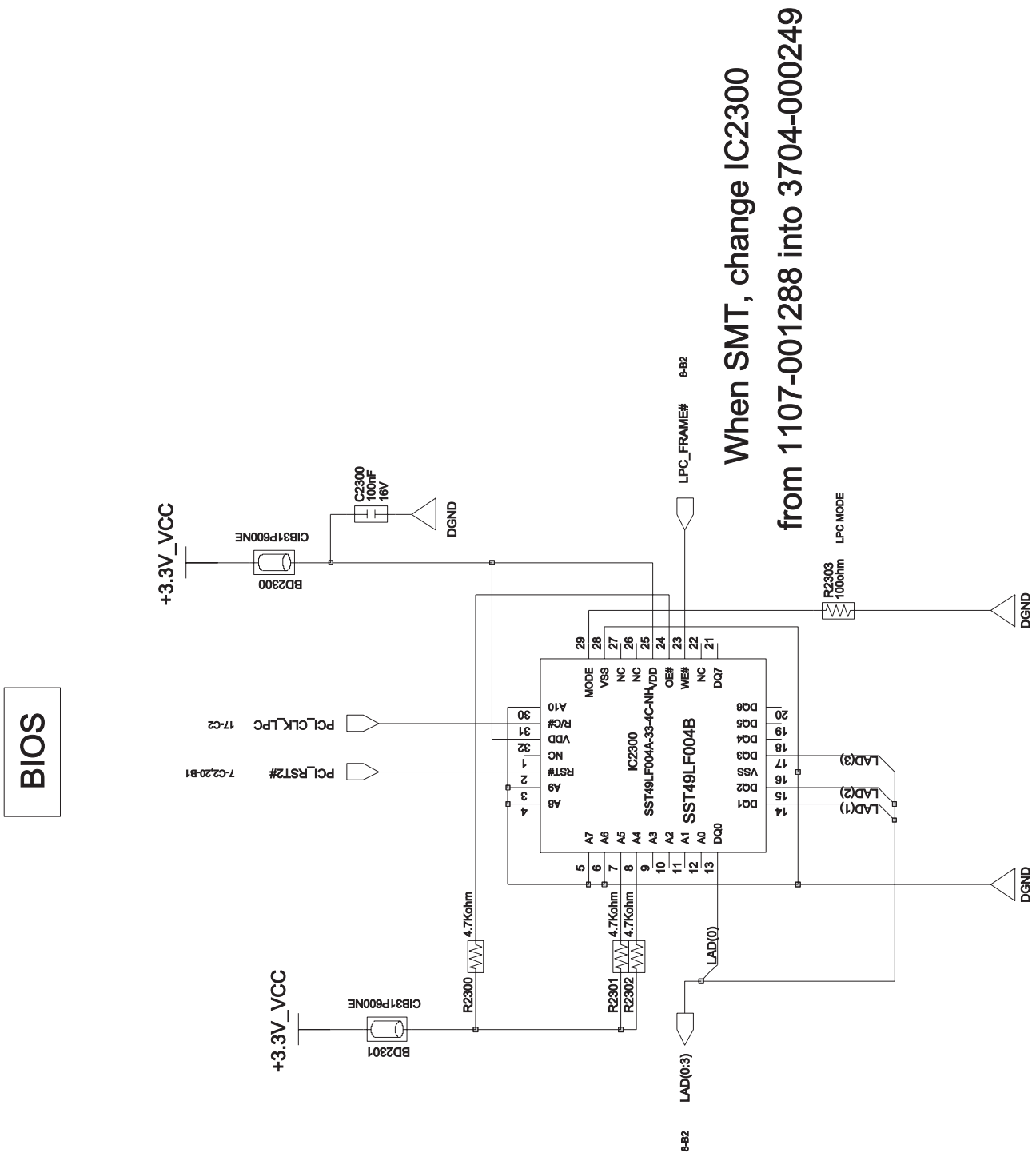

+3.3V_VCC
VCC_CORE
+3.3V_VCC
VCC_CORE
C1709
10nF
50V
C1708
10nF
50V
Power plane stitching caps.
Place where high-speed differential USB lines cross power planes.
+3.3V_CLK
BD1700
HH-HH632-121JT
C1700
10uF
16V
C1701
100nF
16V
C1702
100nF
16V
C1703
100nF
16V
C1704
100nF
16V
C1705
100nF
16V
C1706
100nF
16V
C1707
100nF
16V
DGND
X1700
HC-49/S-SMD(14.31818MHZ)
14.31818MHz
CLK_X1
CLK_X2
C1710
10pF
50V
C1711
10pF
50V
DGND
+3.3V_VCC
BD1701
CIM10J800NC
C1712
10nF
50V
C1713
100nF
16V
C1714
100nF
16V
CLK_AVDD
DGND
+2.5V_VCC
BD1702
HH-HH632-121JT
C1715
10uF
16V
C1716
100nF
16V
DGND
+3.3V_CLK
+3.3V_VCC
R1716
10Kohm
+3.3V_CLK
+3.3V_CLK
IC1700
ICS9527039BFLFT
R1705
33ohm
R1707
33ohm
R1709
33ohm
CLK_X1
CLK_X2
R1710
33ohm
R1712
33ohm
R1715
33ohm
R1717
33ohm
R1718
33ohm
R1704
33ohm
R3025
33ohm
R1706
10ohm
R1708
10ohm
R1711
10ohm
R1713
10ohm
R1714
10ohm
CLK_AVDD
R1719
22ohm
R1720
470ohm
R3148
10ohm
USBCLK48M
PICCLK1
PICCLK0
741CX_CLK
CPU_CLK0
CPU_CLK0#
SDAT_GPIO
AGP_CLK0
C1728
10pF
C1727
10pF
C1726
10pF
C1725
10pF
C1724
10pF
C1723
10pF
C1722
10pF
C1721
10pF
C1720
10pF
C1719
10pF
C1718
10pF
C1717
10pF
C3063
10pF
DGND
OSCI
VOSCI
CLK_AUD_14M
ZCLK0
ZCLK1
SCLK_GPIO
PCI_CLK_SB
PCI_CLK_CX
PCI_CLK_LPC
PCI_CLK_RTL
PCI_CLK_MINIPCI

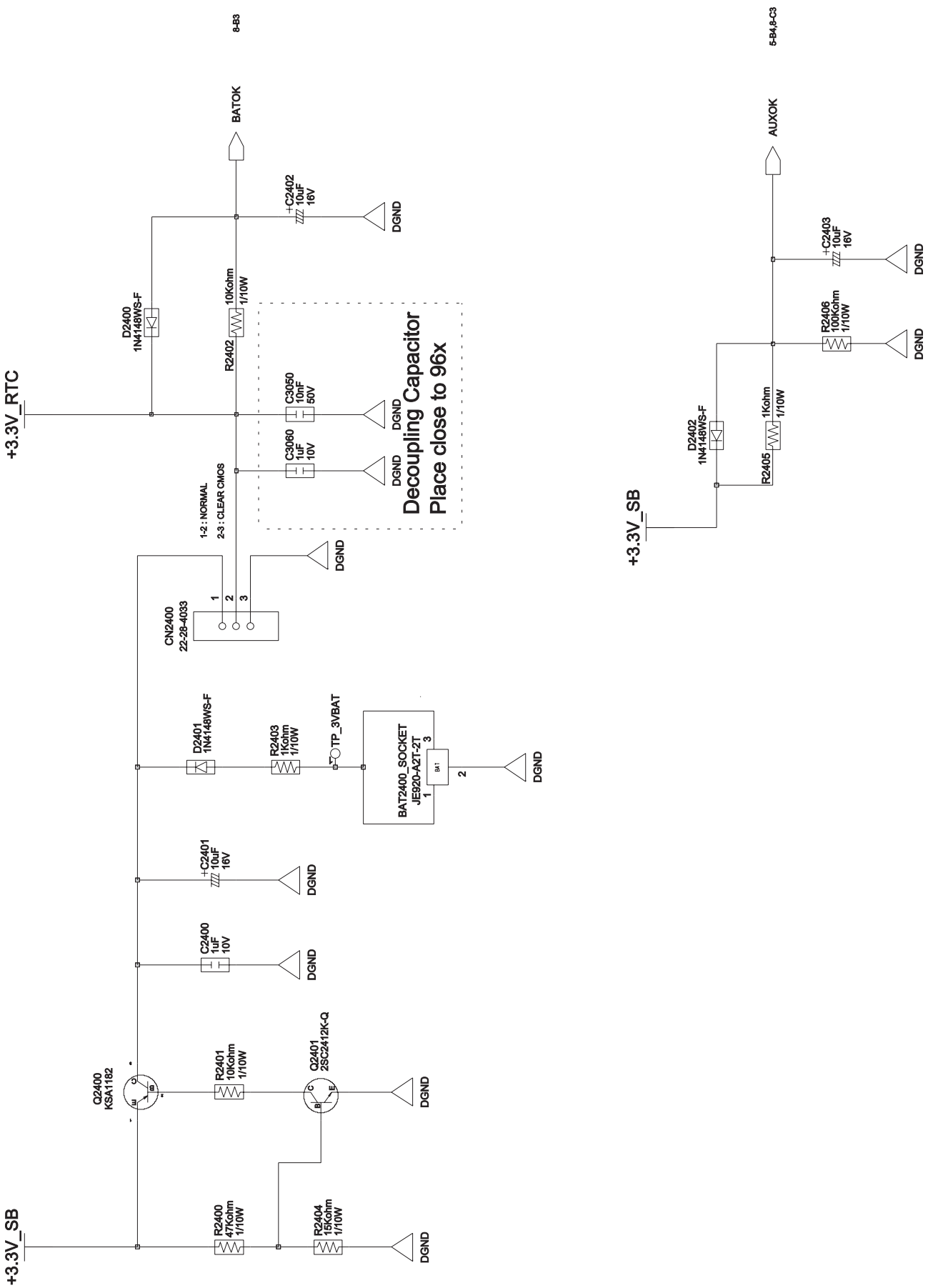

CN1800
Near to CONNECTOR
Near to RTL8139DL
+2.5V_8110
+3.3V_8110
+1.2V_8110
+1.2V_8110
+2.5V_8110
+3.3V_8110
+3.3V_8110
+5V_VCC
GIGABIT ETHERNET
CONTROLLER
IC1800
RTL8110SB-LF
NC
RA1800 ~ RA1807 0 ohm Array change last
2011-001001

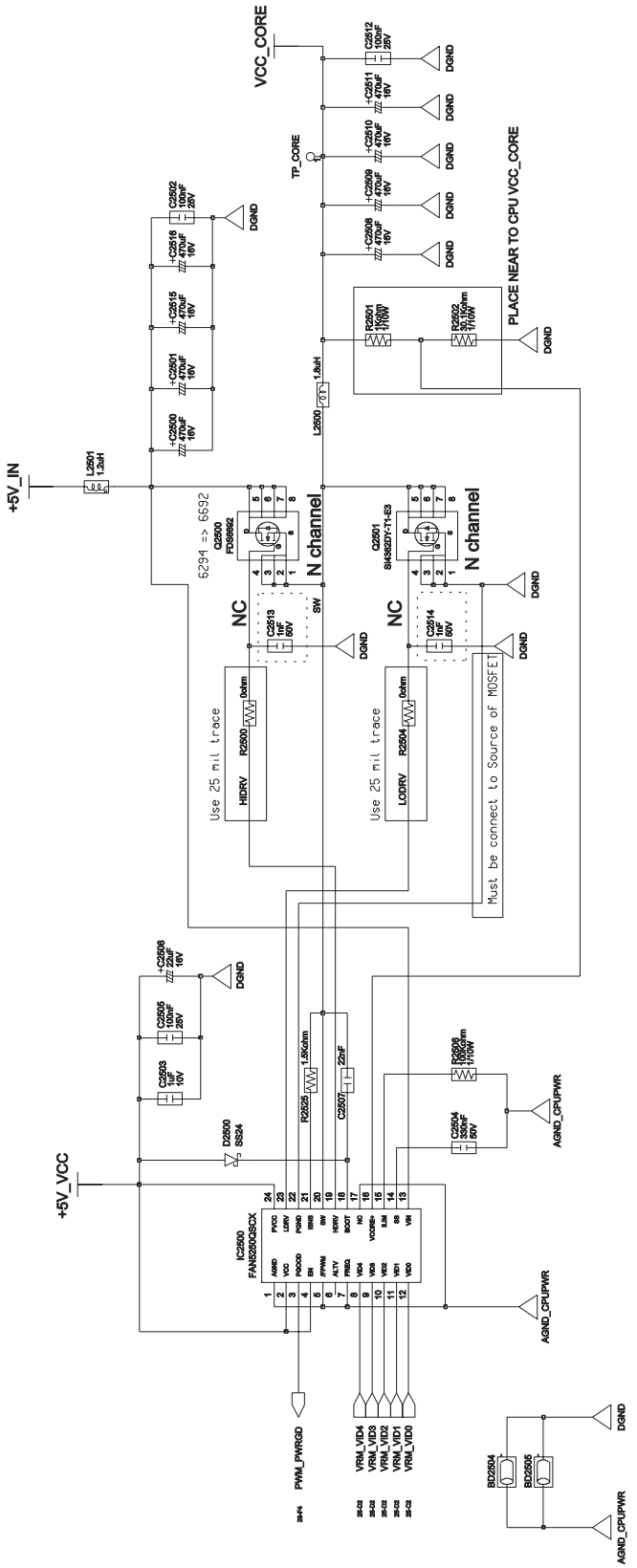

+3.3V_AUD
+5V_IN
IC1901
AP1117D-33A
TP_3.3VAUD
1000mA
C1905
22uF
16V
C1903
10uF
10V
C1902
100nF
16V
AUD_GND
DGND
+3.3V_AUD
+3.3V_VCC
C1907
10uF
60V
C1908
10uF
60V
C1904
10uF
60V
C1906
10uF
60V
R1913
0ohm 1/10W
R1914
0ohm 1/10W
NW_OUTR
NW_OUTL
IC1600
ALC203
R1912
0ohm
1/10W
C1913
100nF
C1912
100nF
C1914
1uF
C1918
1uF
R1908
1/10W
R1907
1/10W
R1909
1/10W
CLK_AUD_14M
AC_SDATAOUT
AC_BIT_CLK
AC_SDATAIN0
AC_SYNC
AC_RST#
BD1905
BD1906

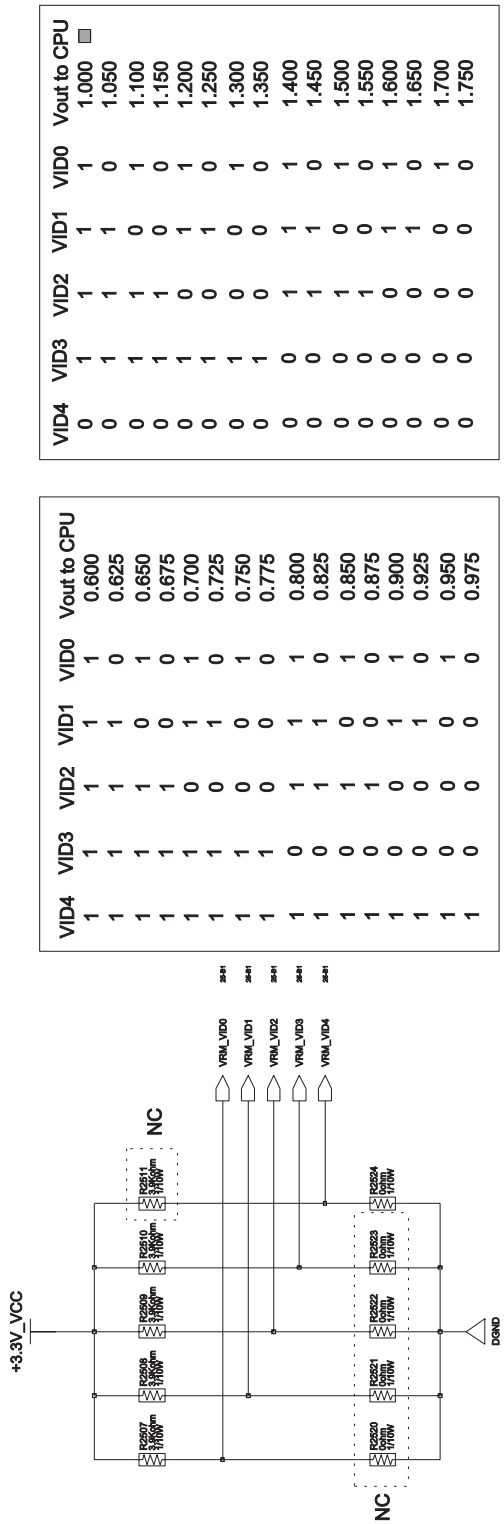

+5V_IN
CIB31P600NE
BD2000
DGND
CBLIDA
R2004 470ohm 1/10W
IDESAA(2)
IDECS#A(1)
CN2000
TP_IDERST
IDEDA(8)
IDEDA(9)
IDEDA(10)
IDEDA(11)
IDEDA(12)
IDEDA(13)
IDEDA(14)
IDEDA(15)
IDEDA(7)
IDEDA(6)
IDEDA(5)
IDEDA(4)
IDEDA(3)
IDEDA(2)
IDEDA(1)
IDEDA(0)
IDESAA(1)
IDESAA(0)
IDECS#A(0)
IDEREQA
IDEIOW#A
IDEIOR#A
ICHRDYA
IDACK#A
IDEIRQA
IDE_RST#
IDEDA(0:15)
RED LED
OP2
LTST-C150CKT
R2003 4.7Kohm 1/10W
IDESAA(0:2)
IDECS#A(0:1)
+5V_VCC
+3.3V_VCC
R2001 1.5Kohm 1/10W
R2000 1.5Kohm 1/10W
Q2000 2SC2412K-Q
Q2001 2SC2412K-Q
R2002 4.7Kohm 1/10W
PCI_RST2#
R2005 5.6Kohm 1/10W


USB 3Port
CN2102
UB11123-M5
TP_USBGND
+5V_USB
+5V_IN
+5V_USBNW
NC
DGND
+3.3V_VCC
+5V_VCC
Power plane stitching caps.
Place where high-speed differential USB lines cross power planes.


BIOS
When SMT, change IC2300
from 1107-001288 into 3704-000249
+3.3V_VCC
CIB31P600NE
BD2300
C2300
100nF
16V
DGND
LPC_FRAME#
8-B2
LPC MODE
R2303
100ohm
DGND
IC2300
SST49LF004A-33-4C-NH
SST49LF004B
MODE
VSS
NC
NC
VDD
OE#
WE#
NC
DQ7
A10
R/C#
VDD
NC
RST#
A9
A8
DQ6
DQ5
DQ4
DQ3
VSS
DQ2
DQ1
A7
A6
A5
A4
A3
A2
A1
A0
DQ0
PCI_CLK_LPC
17-C2
PCI_RST2#
7-C2,20-B1
LAD(3)
LAD(2)
LAD(1)
LAD(0)
4.7Kohm
4.7Kohm
4.7Kohm
R2300
R2301
R2302
+3.3V_VCC
CIB31P600NE
BD2301
DGND
LAD(0:3)
8-B2


+3.3V_RTC
BATOK
8-B3
D2400
1N4148WS-F
R2402
10Kohm
1/10W
C2402
10uF
16V
DGND
C3050
10nF
50V
C3060
1uF
10V
Decoupling Capacitor
Place close to 96x
1-2 : NORMAL
2-3 : CLEAR CMOS
CN2400
22-28-4033
D2401
1N4148WS-F
R2403
1Kohm
1/10W
TP_3VBAT
BAT2400_SOCKET
JE920-A2T-2T
C2401
10uF
16V
C2400
1uF
10V
Q2400
KSA1182
R2401
10Kohm
1/10W
Q2401
2SC2412K-Q
R2400
47Kohm
1/10W
R2404
15Kohm
1/10W
+3.3V_SB
AUXOK
5-B4,8-C3
C2403
10uF
16V
R2406
100Kohm
1/10W
D2402
1N4148WS-F
R2405
1Kohm
1/10W

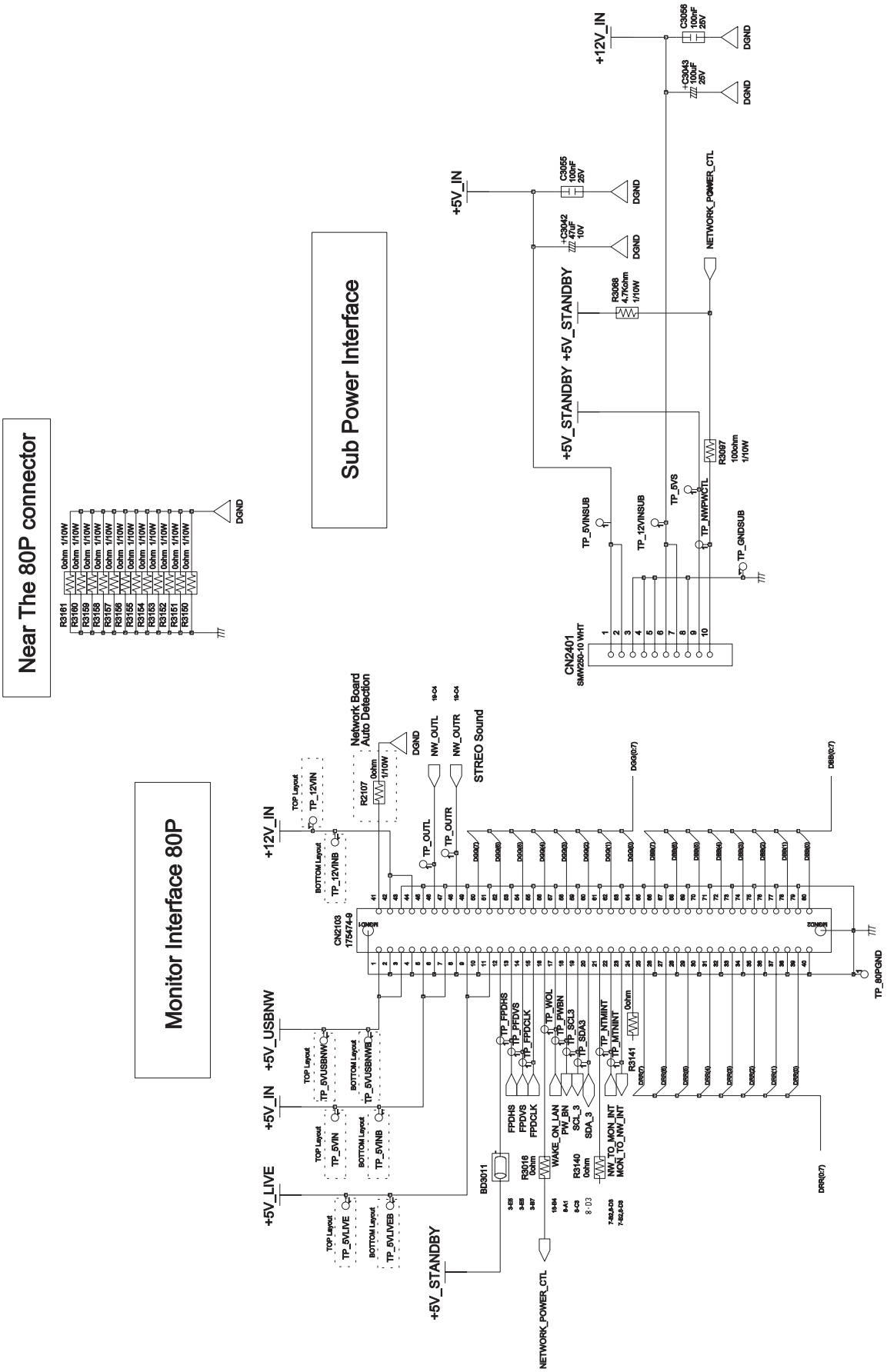


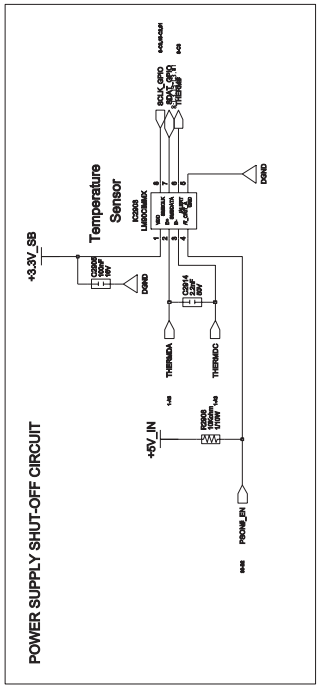


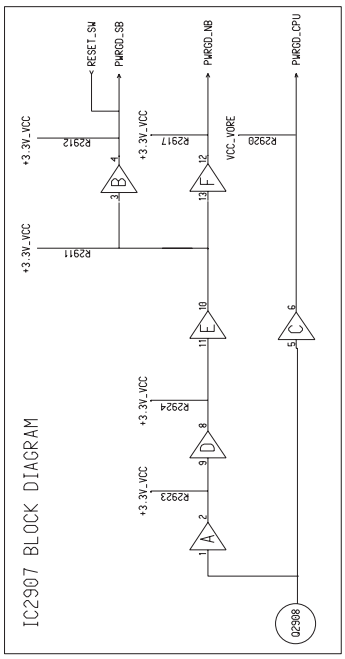
OUTPUT VOLTAGE VID

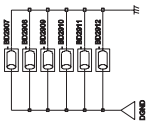
VID4	VID3	VID2	VID1	VID0	Vout to CPU
1	1	1	1	1	0.600
1	1	1	1	0	0.625
1	1	1	0	1	0.650
1	1	1	0	0	0.675
1	1	0	1	1	0.700
1	1	0	1	0	0.725
1	1	0	0	1	0.750
1	1	0	0	0	0.775
1	0	1	1	1	0.800
1	0	1	1	0	0.825
1	0	1	0	1	0.850
1	0	1	0	0	0.875
1	0	0	1	1	0.900
1	0	0	1	0	0.925
1	0	0	0	1	0.950
1	0	0	0	0	0.975

VID4	VID3	VID2	VID1	VID0	Vout to CPU
0	1	1	1	1	1.000
0	1	1	1	0	1.050
0	1	1	0	1	1.100
0	1	1	0	0	1.150
0	1	0	1	1	1.200
0	1	0	1	0	1.250
0	1	0	0	1	1.300
0	1	0	0	0	1.350
0	0	1	1	1	1.400
0	0	1	1	0	1.450
0	0	1	0	1	1.500
0	0	1	0	0	1.550
0	0	0	1	1	1.600
0	0	0	1	0	1.650
0	0	0	0	1	1.700
0	0	0	0	0	1.750

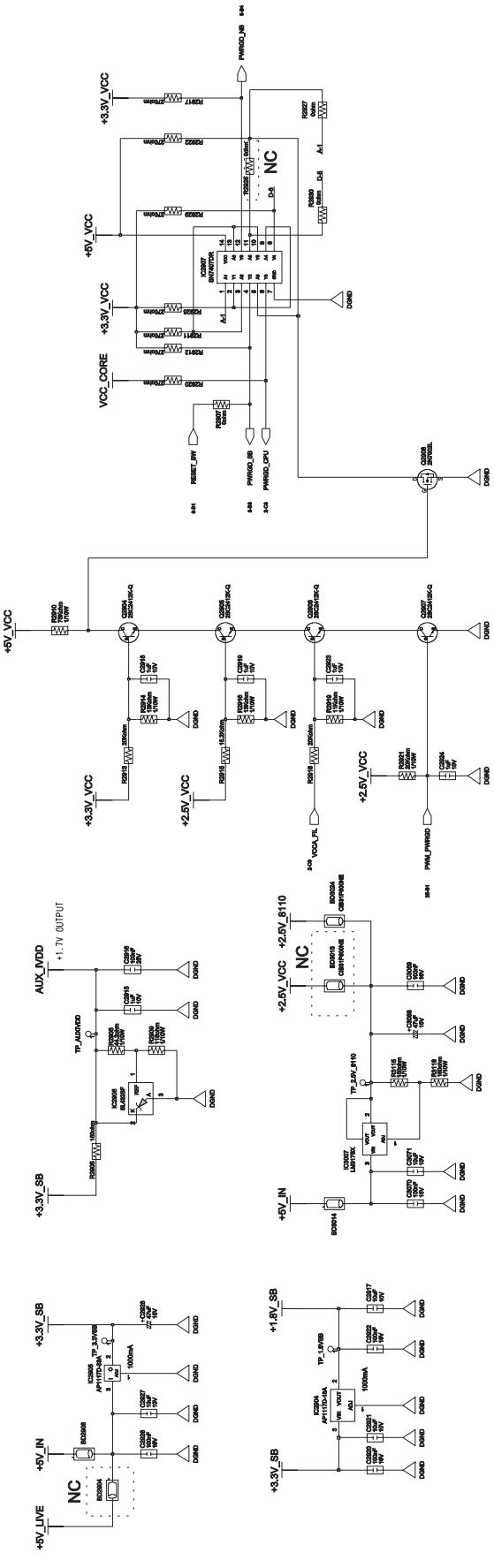

Near The 80P connector
Sub Power Interface
Monitor Interface 80P
+12V_IN
+5V_IN
+5V_STANDBY
+5V_STANDBY +5V_STANDBY
+5V_USBNW
+5V_LIVE
NETWORK_POWER_CTL
NETWORK_POWER_CTL
CN2401
SMW250-10 WHT
CN2103
175474-9
STREO Sound
Network Board
Auto Detection
TP_80PGND
DGND

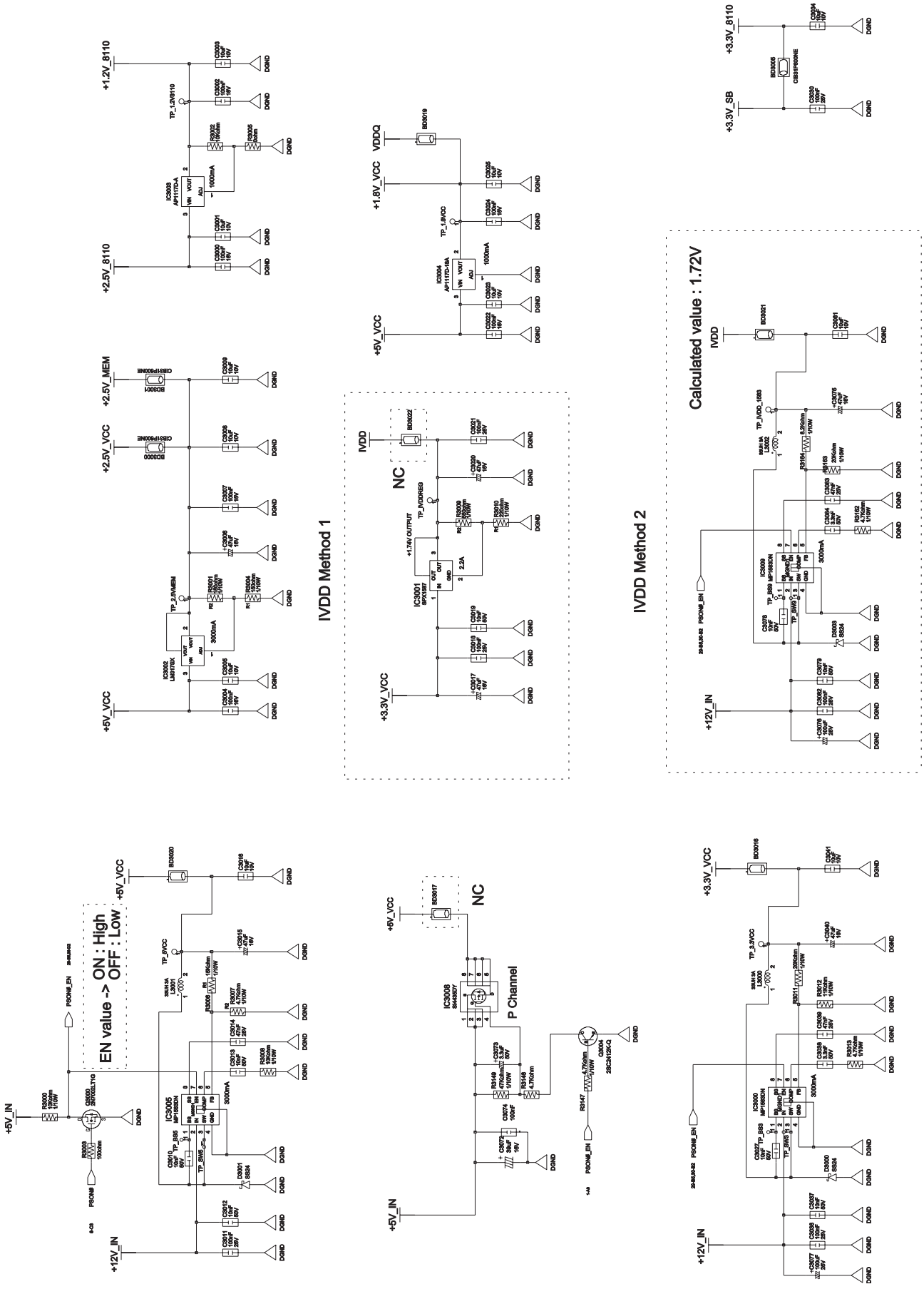


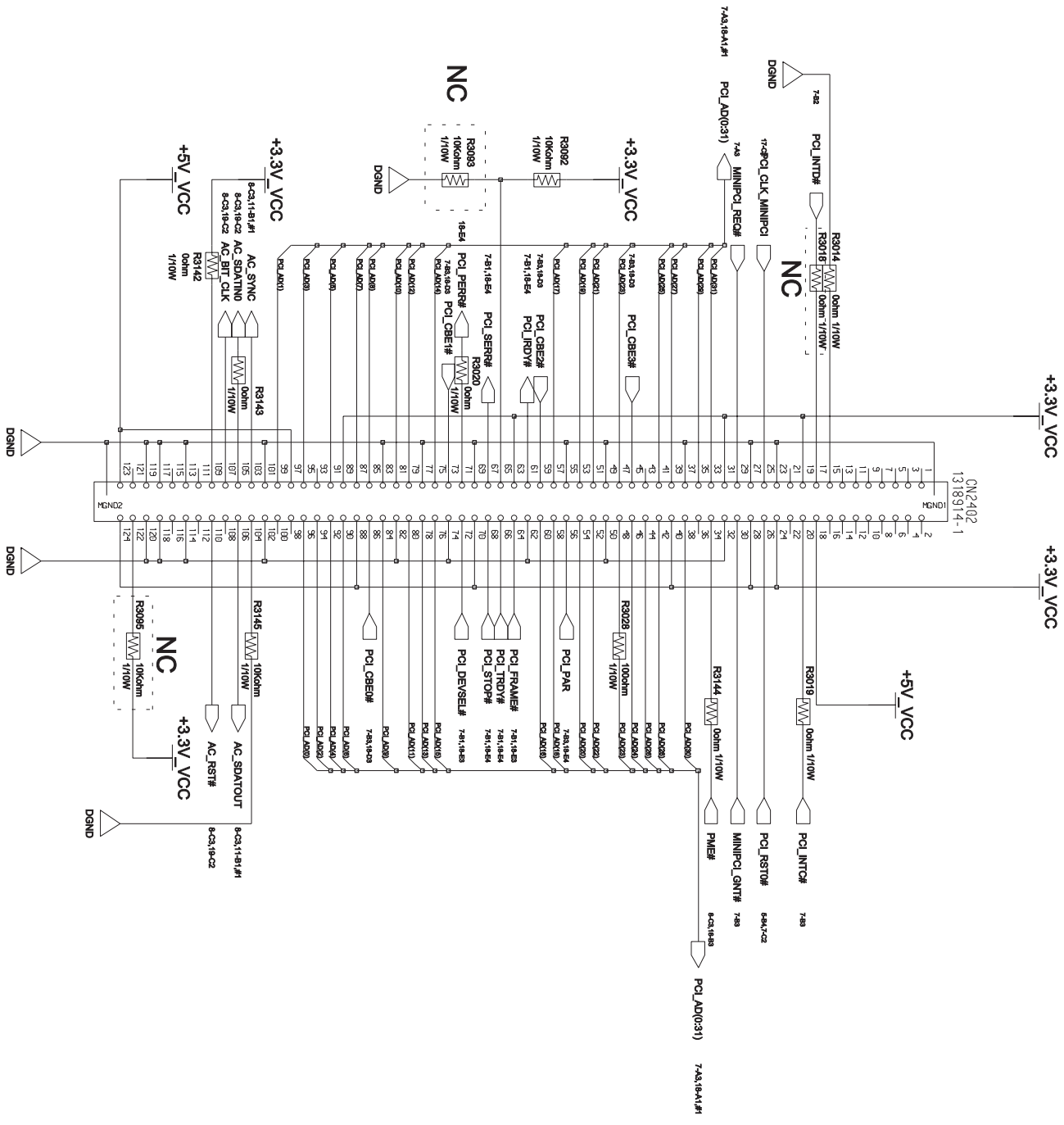




LIVE VOLTAGE GENERATION




+1.2V_8110
+2.5V_8110
+2.5V_MEM
+2.5V_VCC
+5V_VCC
IVDD Method 1
+1.8V_VCC
VDDQ
+5V_VCC
IVDD
NC
+3.3V_VCC
+3.3V_8110
+3.3V_SB
Calculated value : 1.72V
IVDD Method 2
+5V_IN
EN value -> ON : High
OFF : Low
+12V_IN
P Channel
+5V_VCC
NC
+5V_IN
+3.3V_VCC
+12V_IN


+3.3V_VCC
+3.3V_VCC
+5V_VCC
CN2402
13189 14-1
MGND1
MGND2
DGND
DGND
DGND
DGND
DGND
DGND
PCI_AD(0:31)
7-43,18-A1,#1
PCI_INTD#
7-82
PCI_CLK_MINIPCI
17-4
MINIPCI_REQ#
7-49
R3014
0ohm 1/10W
R3018
0ohm 1/10W
NC
R3019
0ohm 1/10W
PCI_INTC#
7-89
PCI_RST0#
6-84,7-C2
MINIPCI_GNT#
7-89
R3144
0ohm 1/10W
PME#
8-C3,18-B3
R3028
100ohm
1/10W
R3092
10Kohm
1/10W
R3093
10Kohm
1/10W
NC
R3020
0ohm
1/10W
PCI_PERR#
7-B1,18-E4
PCI_SERR#
7-B1,18-E4
PCI_IRDY#
7-B3,18-D3
PCI_CBE2#
7-B3,18-D3
PCI_CBE3#
7-B3,18-D3
PCI_CBE1#
7-B5,18-C6
PCI_CBE0#
7-B5,18-C6
PCI_PAR
7-B5,18-E4
PCI_FRAME#
7-B1,18-E3
PCI_TRDY#
7-B1,18-E4
PCI_STOP#
7-B1,18-E4
PCI_DEVSEL#
7-B1,18-E3
R3143
0ohm
1/10W
AC_SYNC
8-C3,11-B1,#1
AC_SDATIN0
8-C3,19-C2
AC_BIT_CLK
8-C3,19-C2
R3142
0ohm
1/10W
R3145
10Kohm
1/10W
AC_SDATOUT
8-C3,11-B1,#1
R3096
10Kohm
1/10W
NC
AC_RST#
8-C3,19-C2
+3.3V_VCC
+5V_VCC
+3.3V_VCC
+3.3V_VCC

Memo

10 Operating Instructions and Installation

10-1 Front

1. MENU
2. Up-Down buttons
3. Left-Right buttons
4. ENTER / FM RADIO
5. SOURCE
6. PIP
7. Power button
8. Power indicator
9. Remote Control Sensor

MENU :
Use this button to open or exit the OSD menu or return to the previous menu.

Up-Down :
Moves from one menu item to another vertically or adjusts selected menu values. Also use to adjust the TV channel.

Left-Right :
Moves from one menu item to another horizontally or adjusts selected menu values. Also use to adjust the volume.

ENTER / FM RADIO :
Activates a highlighted menu item. Listen to the FM Radio.

SOURCE :
Selects the video signal. Changing the source is allowed only in devices that are connected to the monitor at the time.
* Video Signal Changing Order
[PC] [BNC] [DVI] [TV] [AV] [S-Video] [Component] [MagicNet]

PIP(Picture in Picture) :
Push the PIP button to turn PIP screen On or Off.

BNC and Component cannot display PIP at the same time by using the same terminal.
-PC / DVI : TV / AV / S-Videos / Component Mode
-BNC: TV / AV / S-Video
-AV/ S-Video : PC / BNC / DVI Mode
-Component : PC / DVI Mode

POWER :
Use to turn the monitor on or off.

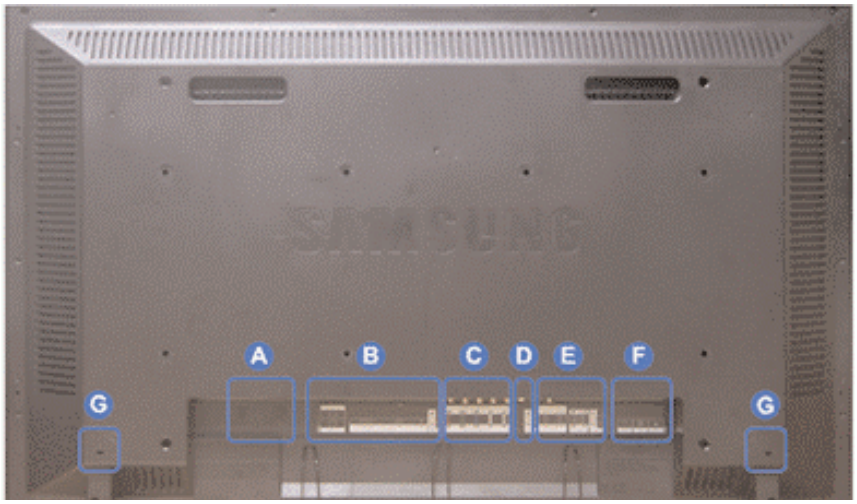
LED :
Lights up in normal mode. It blinks in green in Power Saver mode.

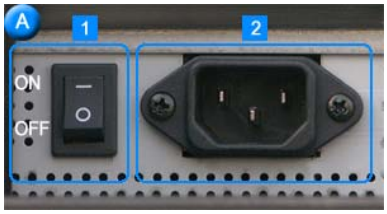
Remote Control Sensor: Receives the remote control signal.

10-1-1 Rear

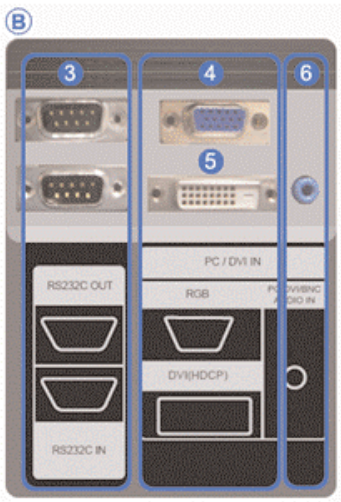
The monitor's rear configuration may vary slightly depending on the monitor model.

-Connection Terminal



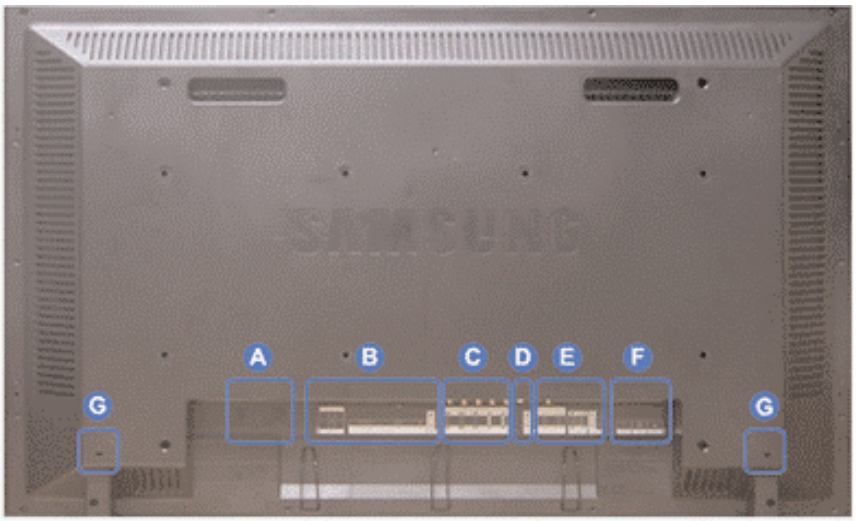


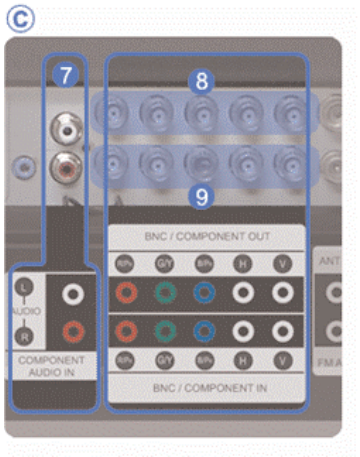
1. POWER S/W
2. POWER IN



3.RS232C OUT/IN
(RS232C Serial Input/Output Port):
MDC(Multiple Device Control)
Program Input/Output Port
4. PC IN(RGB) (PC Video Input Port)
: D-Sub(15 Pin) - PC Mode (Analog PC)
5. DVI IN(HDCP) (PC Video Input Port)
: DVI-D to DVI-D - DVI Mode (Digital PC)
6. PC/DVI/BNC AUDIO IN
(PC/DVI/BNC Audio Input Port)

-Connection Terminal





7. COMPONENT AUDIO IN [L-AUDIO-R]

(Component Audio Input Port)

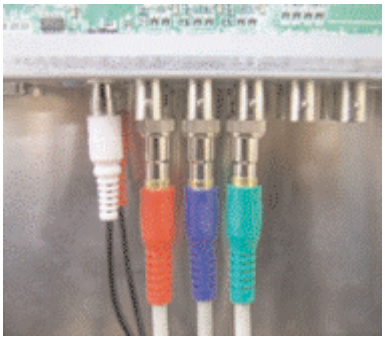
8. BNC/COMPONENT OUT

(BNC Video Output Port/Component Output Port)

BNC Mode (Analog PC) Connection : R, G, B, H, V Port

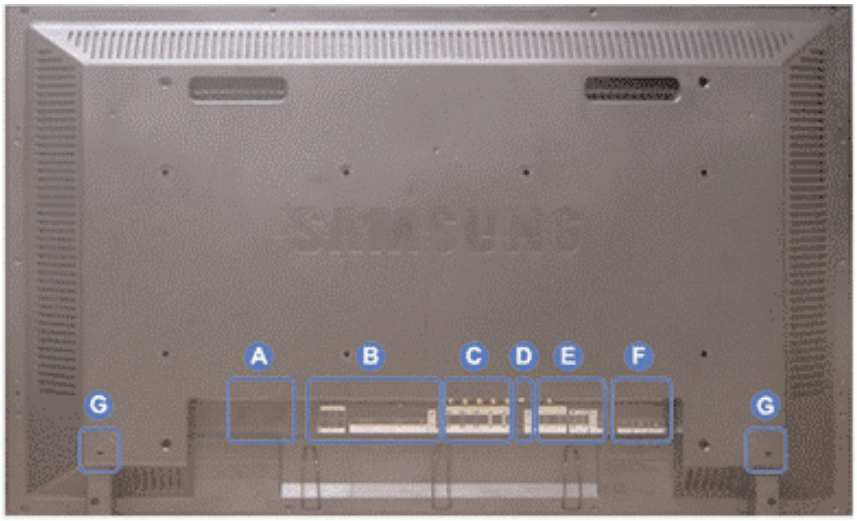
Component Connection: PR, Y, PB Port Connection

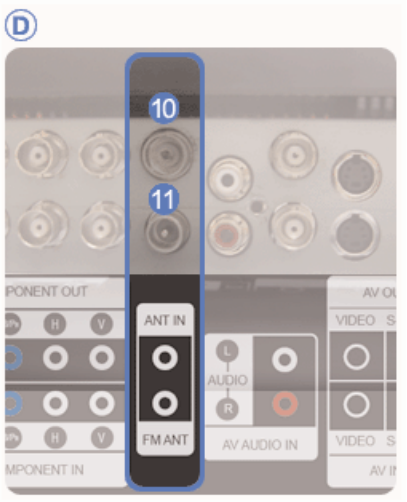
BNC



COMPONENT

-Connection Terminal





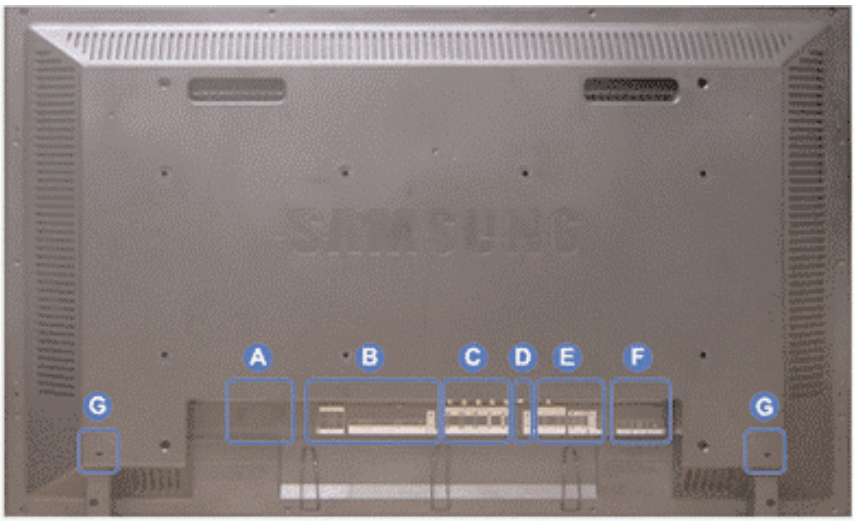
10. ANT IN

RF(TV) Antenna Port

11. FM ANT

FM Radio Input Port

-Connection Terminal



12. AV AUDIO IN [L-AUDIO-R]
(Monitor Audio Connection Input Port)

13. AV OUT [VIDEO](Video Output Port):
AV mode

14. AV IN [VIDEO](Video Input Port)

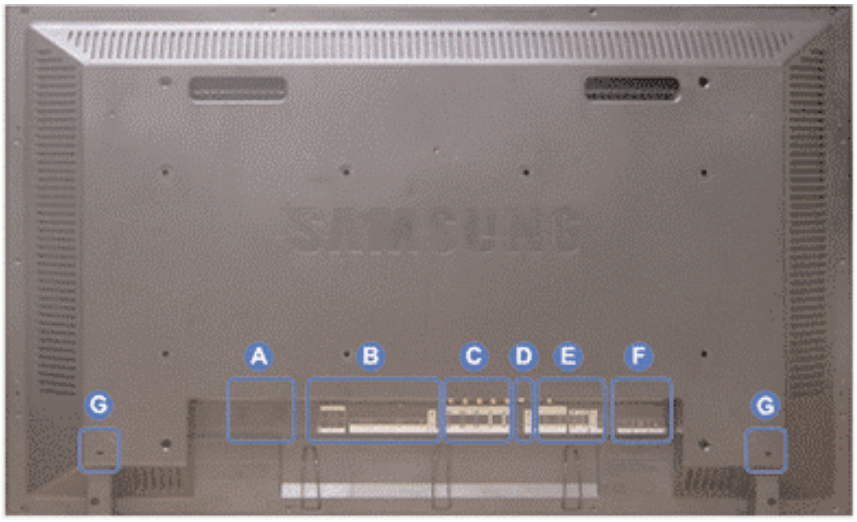
15. AV OUT [S-Video](S-Video Output Port)
S-Video Mode

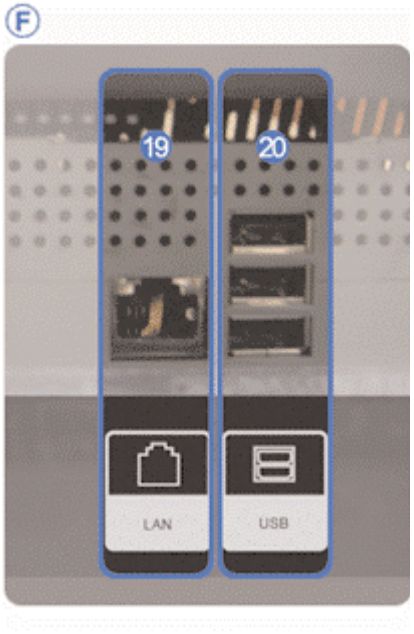
16. AV IN [S-Video](S-Video Input Port)

17. EXT SPEAKER(8 ¥Ø)
Speaker Connection Port (8 ¥Ø)

18. AUDIO OUT [L-AUDIO-R]
(Monitor Audio Output Port)
PC, DVI, BNC Sound Output Port

-Connection Terminal

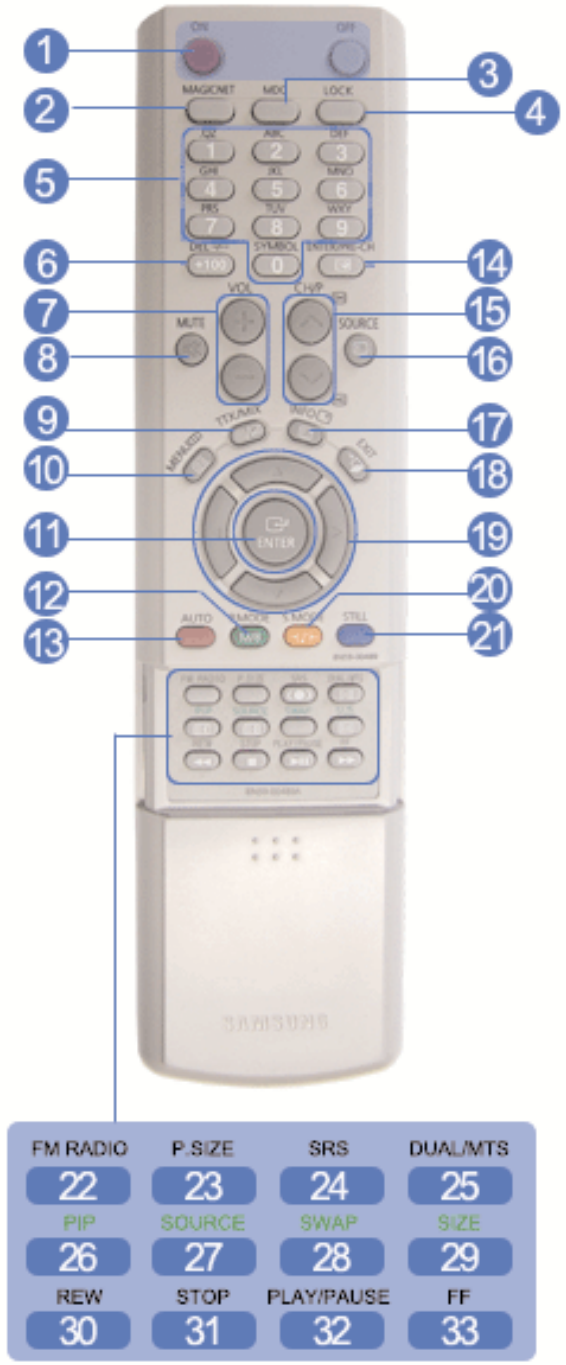




19. LAN (LAN Connection Port)
MS Internet Explorer

20. USB (USB Connection Port)
Keyboard/Mouse, Portable Storage Device

10-1-2 Remote Control



1) ON / OFF
   Use these buttons to turn the monitor on or off.
2) MAGICNET
   MagicNet Quick Launch Button.
3) MDC
   MDC Quick Launch Button.
4) LOCK
   This button will activate or deactivate all function keys on both the remote control and the monitor except for the Power and LOCK buttons.
5) MagicNet buttons
   Used for MagicNet. ? Alphanumeric: Used to enter the Internet address.
   - DEL: Functions as the backspace.
   - SYMBOL: Used to enter the symbols. (.O_-:/)
   - ENTER: Used to enter values.
6) +100
   Press to select channels over 100.
   For example, to select channel 121, press "+100", then press "2" and "1".
   [This fuction does not work for this monitor.]
7) VOL
   Adjusts the audio volume.
8) MUTE
   Pauses (mutes) the audio output temporarily.
   Displayed on the lower left corner of the screen.
   The audio resumes if MUTE or - VOL + is pressed in the Mute mode.
9) TTX/MIX
   TV channels provide written information services via teletext.
   [This function is available only in Europe.]
10) MENU
   Use this button to open the on-screen menu and exit from the menu screen or close screen adjust ment menu.
11) ENTER
   Activate a highlighted menu item.
12) P.MODE
   This button is used to return to the immediately pre vious channel.
   [This fuction does not work for this monitor.]
13) AUTO
   Adjusts the screen display automatically.
   If you change resolution in the control panel, auto function will be executed.

14) ENTER/PRE-CH
This button is used to return to the immediately previous channel.
[This fuction does not work for this monitor.]
15) CH/P
In TV mode, selects TV channels.
16) SOURCE
Push this button to change video sources.
17) INFO
Current picture information displays on the upper left corner of the screen.
18) EXIT
Exits from the menu screen.
19) Up-Down Left-Right buttons
Moves from one menu item to another horizontally, vertically or adjusts selected menu values.
20) S.MODE
When you press this button, current mode is displayed on the lower center of the screen.
The monitor has a built-in high fidelity stereo amplifier.
Then push button again to circle through available preconfigured modes.
(Standard ¡æ Music ¡æ Movie ¡æ Speech ¡æ Custom)
21) STILL - Operates only for the CVBS, S-Video and RF Signal sources.
Press the button once to freeze the screen.
Press it again to unfreeze.
22) FM RADIO
Turns on/off FM Radio.
In PC/DVI mode, sets only SOUND to FM Radio.
In general Video SOURCE mode, sets to FM RADIO, turning off the screen.
In areas where signal is weak, noise may occur while FM radio is broadcast.
23) P.SIZE
Press to change the screen size.
24) SRS
SRS
25) DUAL/MTS
DUAL-
STEREO/MONO, DUAL I / DUAL II and MONO/NICAM MONO/NICAM STEREO can be operated depending on broadcasting type by using DUAL button on the remote control while watching TV.
MTS-
You can select the MTS (Multichannel Television Stereo) mode.
26) PIP
Every time you push the button, a PIP screen appears.
27) SOURCE
The PIP window's signal source changes.
28) SWAP
Swapping the contents of the PIP and main image.
The image in the PIP window will appear on the main screen, and the main screen image will appear in the PIP window.
29) SIZE
You can switch the Picture Size.
30) ◄◄ REW
Rewind
31) ■ STOP
Stop
32) ►II PLAY / PAUSE
Play/Pause
33) ►► FF
Fast forward

10-2 Installing Stand Kit

Left stand Right stand

⚠ Make sure to install the stand with Caution label folded backward.

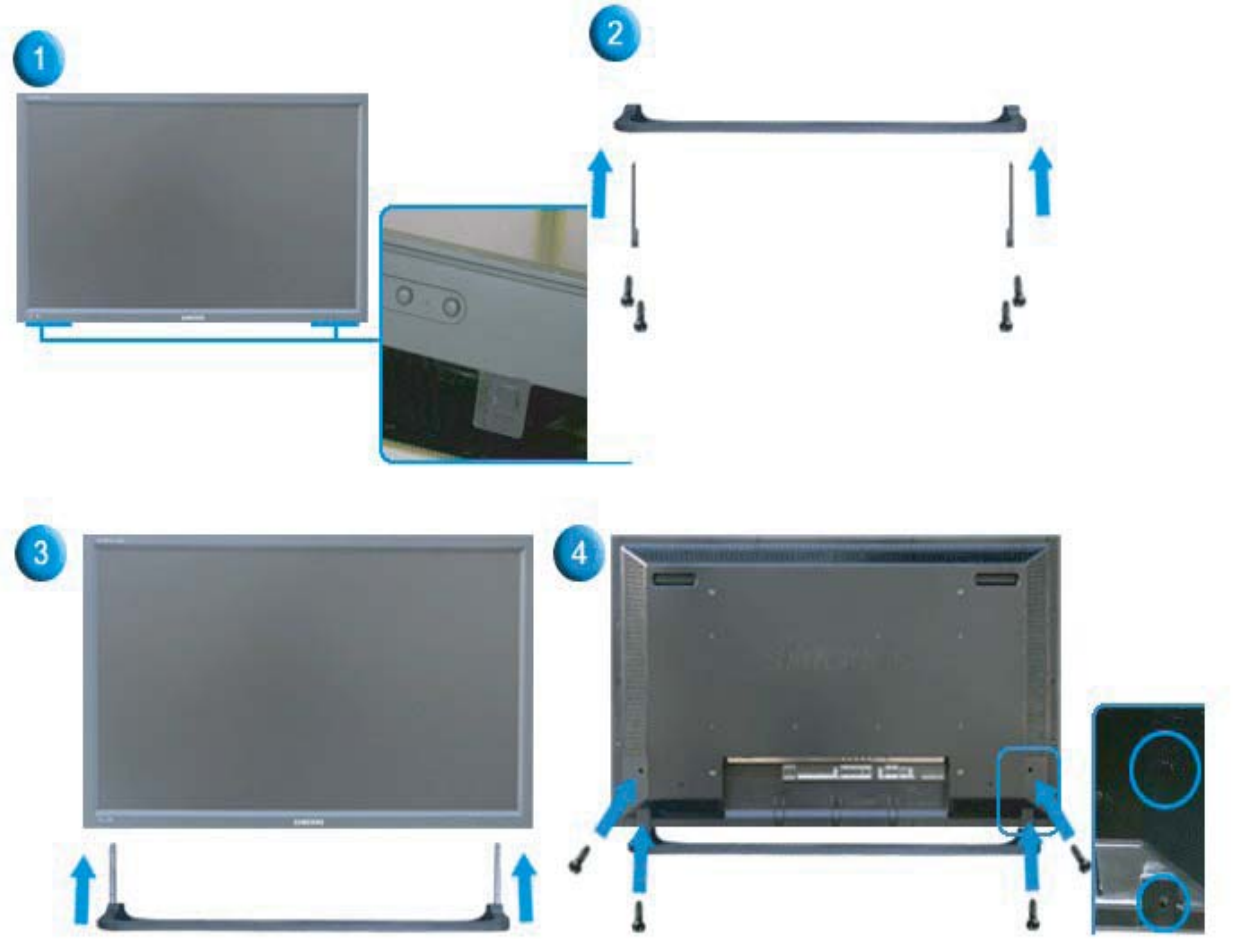
1. A 'Cover-Protector' is used to protect the hole at the bottom of the monitor, where the stand is inserted. Be sure to remove the 'Cover-Protector' when attaching the provided Semi Stand or stand kit (sold sepa rately) and cover the hole using the 'Cover-Hole' when attaching the wall mount kit.

2. Set up the left and right stands respectively.

3. Put the stand into the hole at the bottom of the monitor.
   Insert screw into the hole indicated and tighten. (M4 × L15)

⚠ **Make sure to use the semi stand only for adjusting the screen.**
The company is not responsible for the damage caused by using them with other purpose.

10-2-1 Installing Stand Kit (sold separately)



1. A 'Cover-Protector' is used to protect the hole at the bottom of the monitor, where the stand is inserted. Be sure to remove the 'Cover-Protector' when attaching the provided Semi Stand or stand kit (sold separately) and cover the hole using the 'Cover-Hole' when attaching the wall mount kit.

2. Make sure you put the parts in the right direction and in the right place. (M4 × L15)

3. Put the stand into the hole at the bottom of the monitor.

4. Insert screw into the hole indicated and tighten. (M4 × L15)

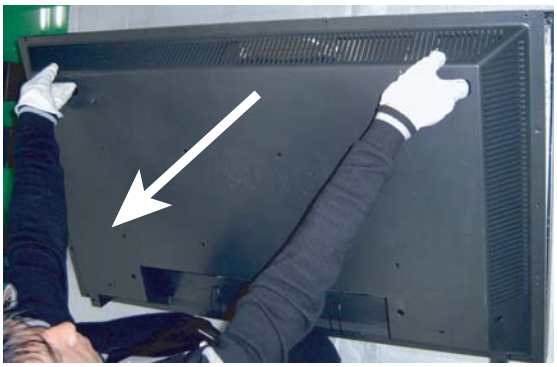
11 Disassembly and Reassembly

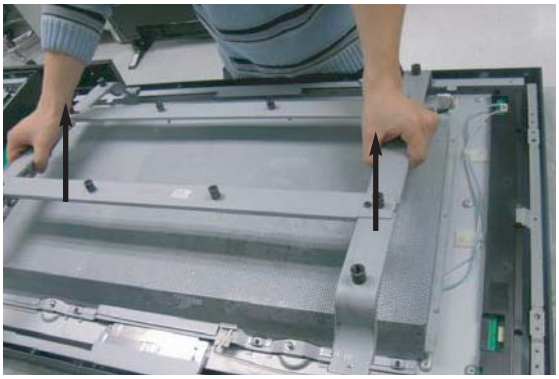
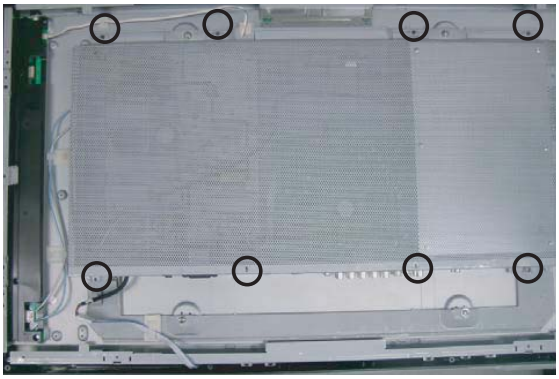
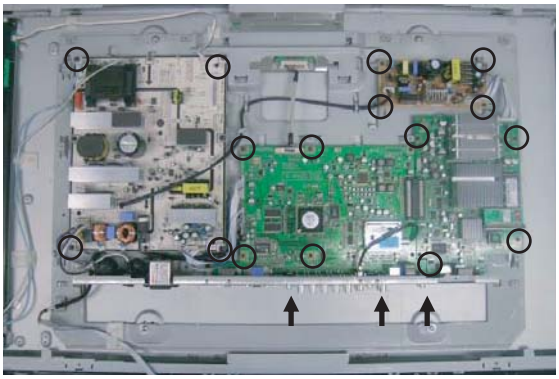
This section of the service manual describes the disassembly and reassembly procedures for the BE40TS LCD monitor.

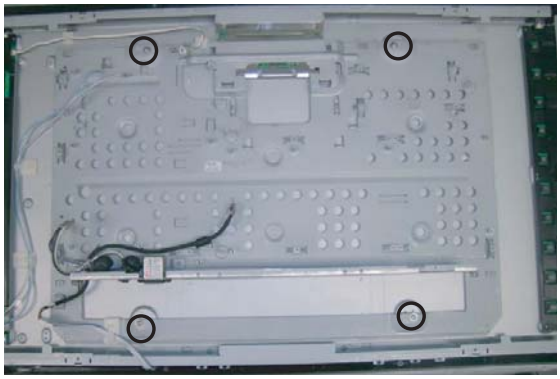
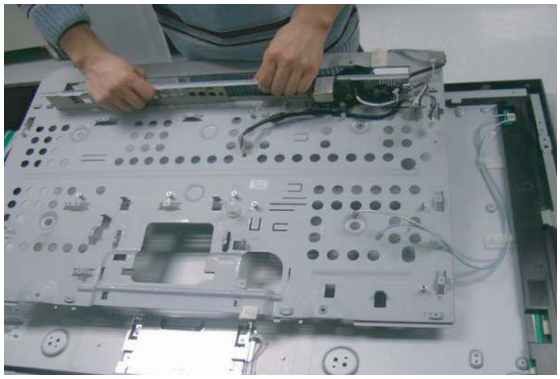
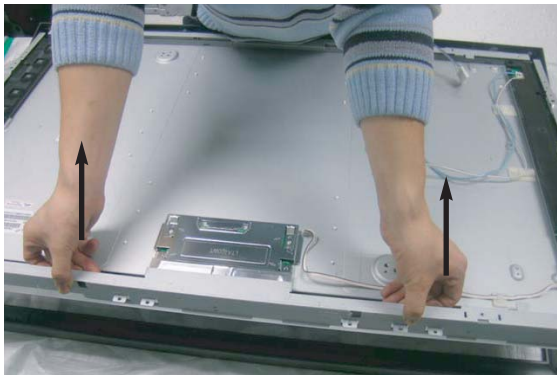
⚠ WARNING: This monitor contains electrostatically sensitive devices. Use caution when handling these components.

11-1 Disassembly

⚠ Cautions: **1. Disconnect the monitor from the power source before disassembly.**
2. Follow these directions carefully; never use metal instruments to pry apart the cabinet.

Description	Picture Description
1. Place monitor face down on cushioned table. Remove 12 screws from the rear cover. Lift up the rear cover.	
	
2. Remove 4 screws from the Wall Braket and lift up the BRKT..	

Description	Picture Description
	
3. Remove 8 screws from the Shield and lift up the shield.	
4. Remove screws from the boards and disconnect cables.	

Description	Picture Description
5. Remove 4 screws from the BRKT and lift up the BRKT.	
	
6. Lift up the panel	

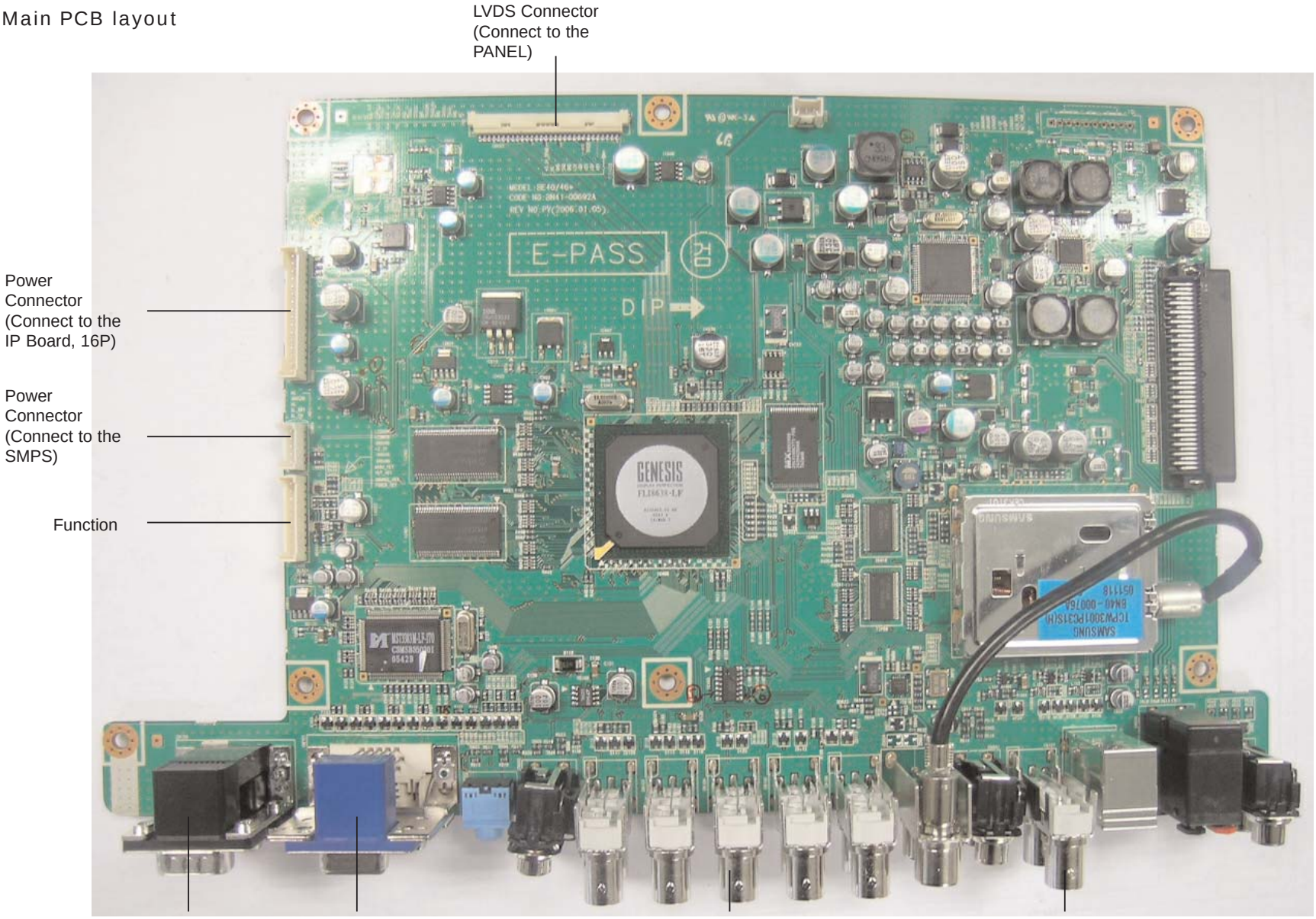
Description	Picture Description
7. Remove screws from the side BRKT.	

11-2 Reassembly

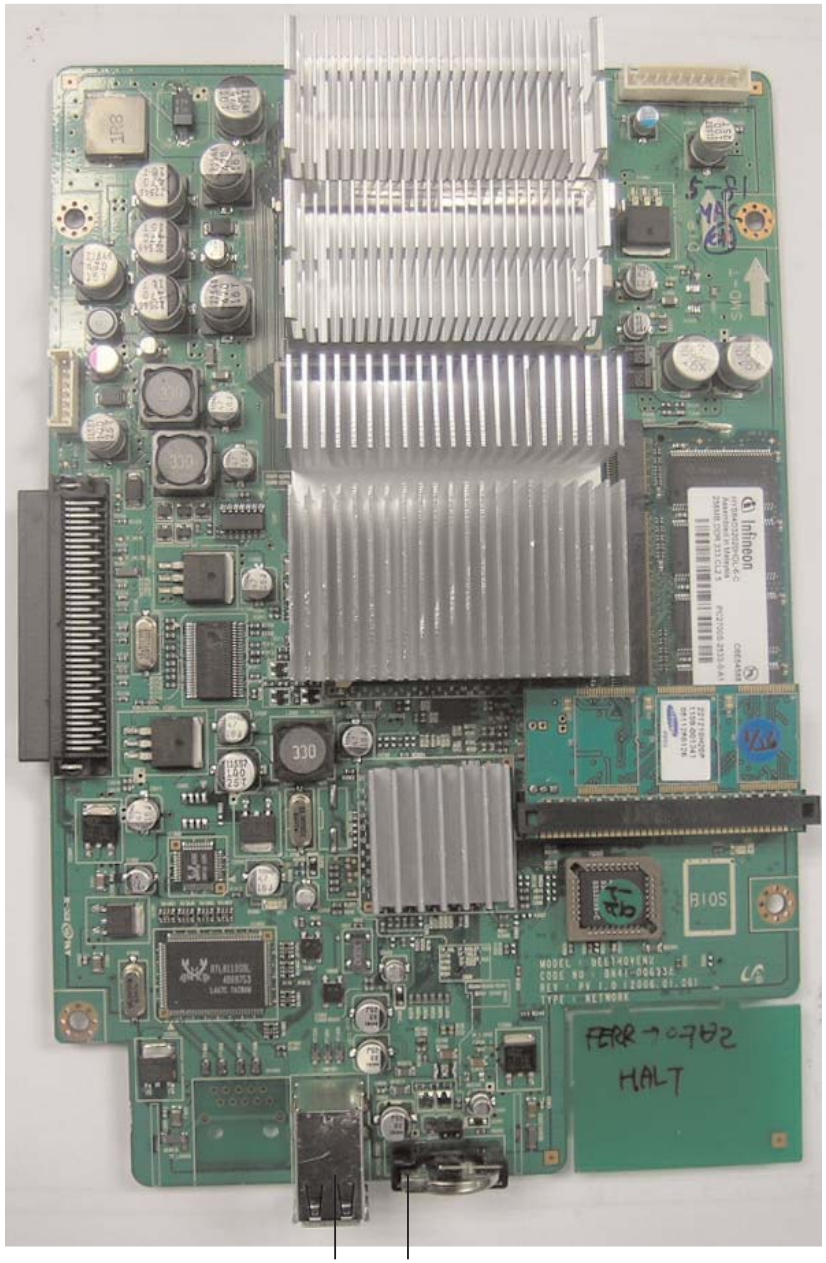
Reassembly procedures are in the reverse order of dissasembly procedures, place the lamp wire correctly in the locator groove so that the wire will not bind or interfere with rear cover.

12 PCB layout

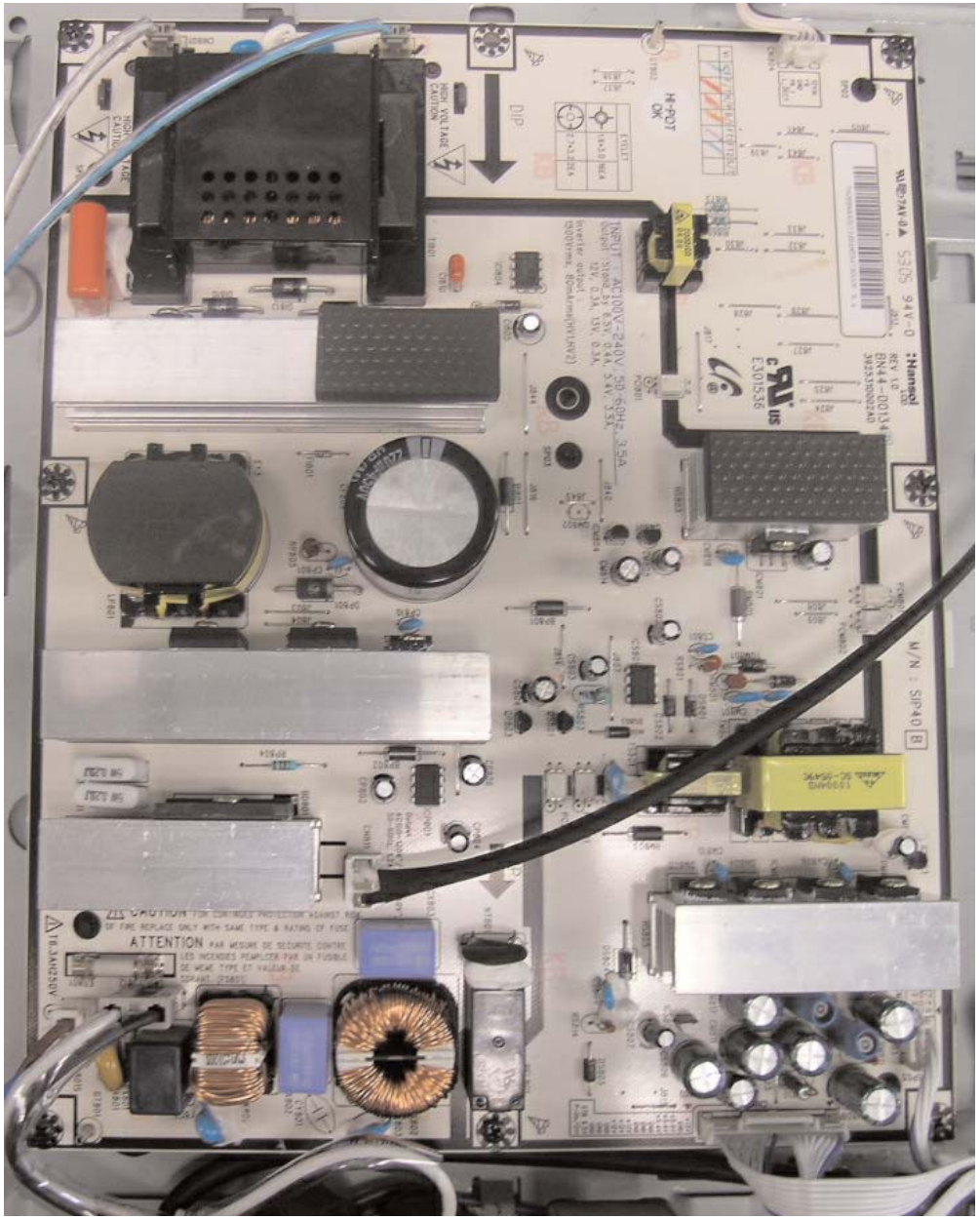
12-1 Main PCB layout



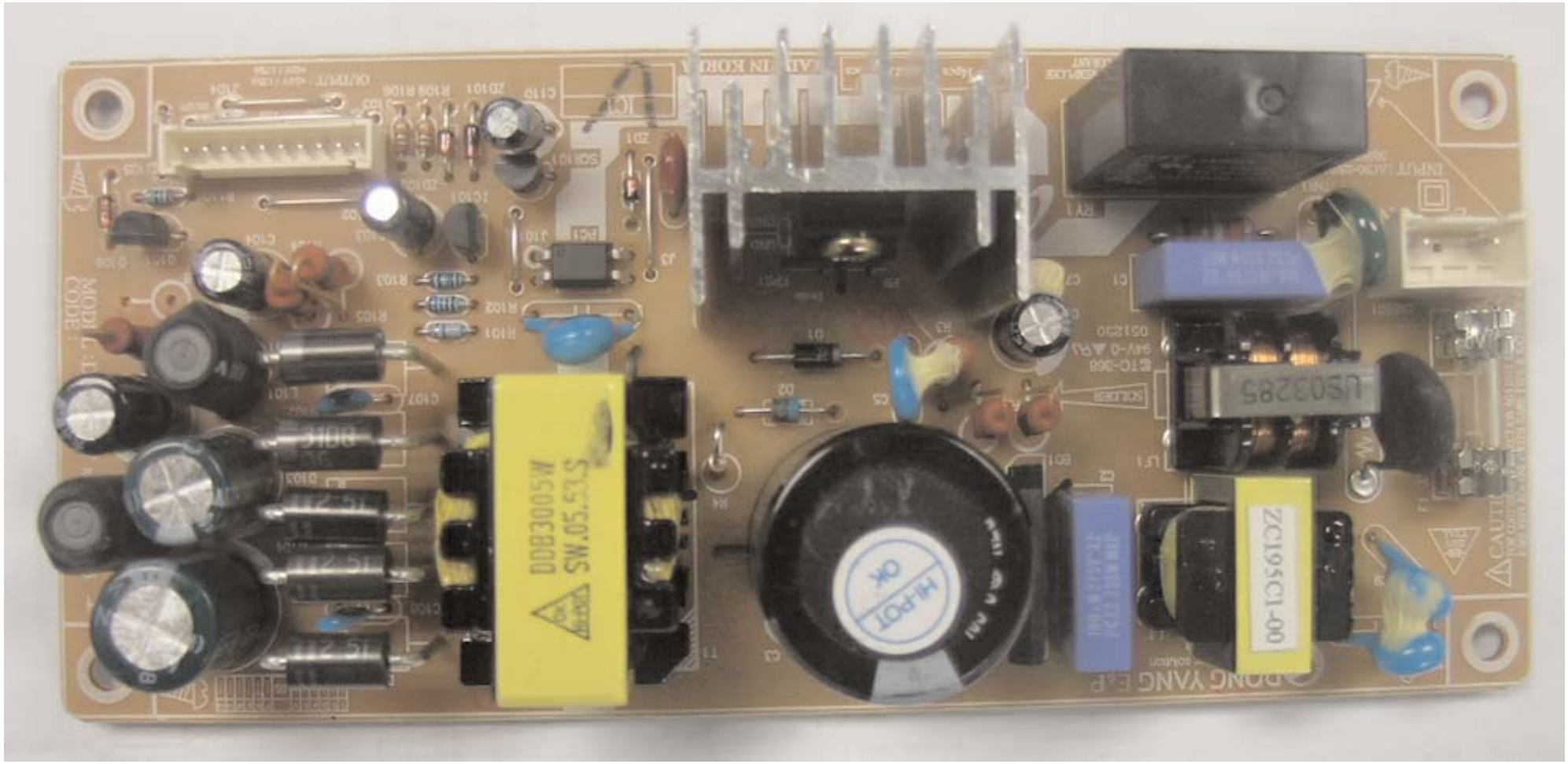
12-2 Network PCB layout



12-3 IP board layout



12-4 Network Power board layout

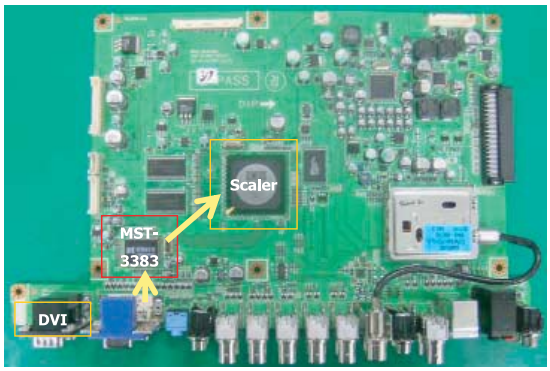


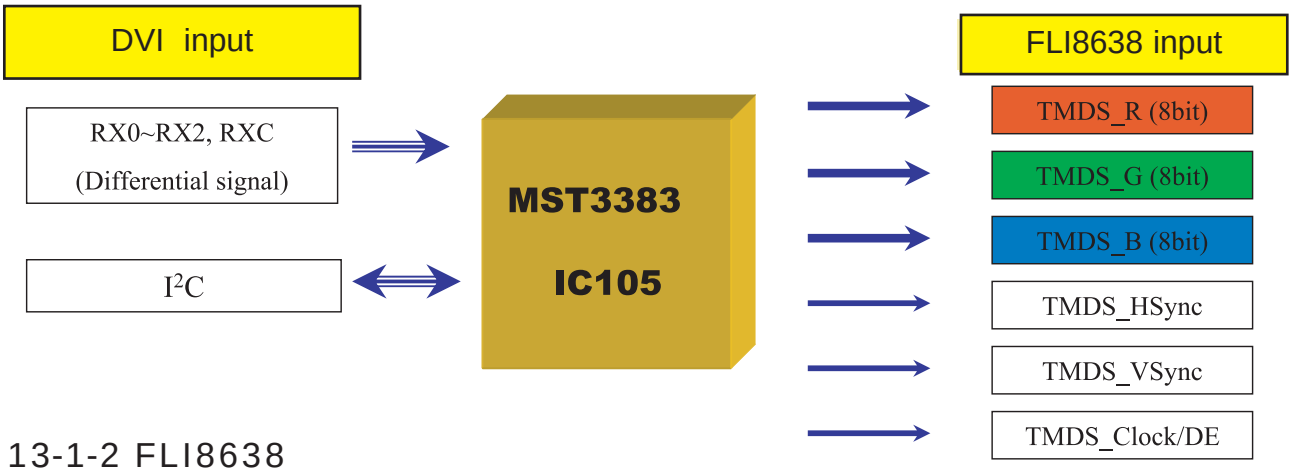
13 Circuit Descriptions

13-1 Main board part

13-1-1 MST3383

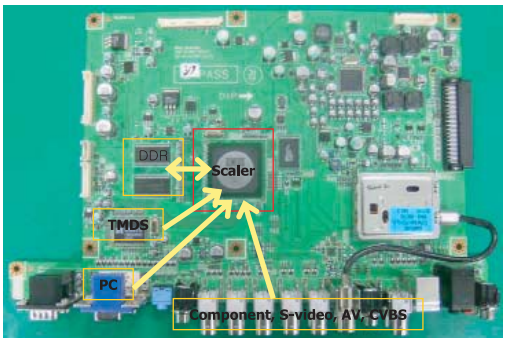
- TMDS Receiver
 - Convert the DVI input to the TMDS signal and send to the scaler.

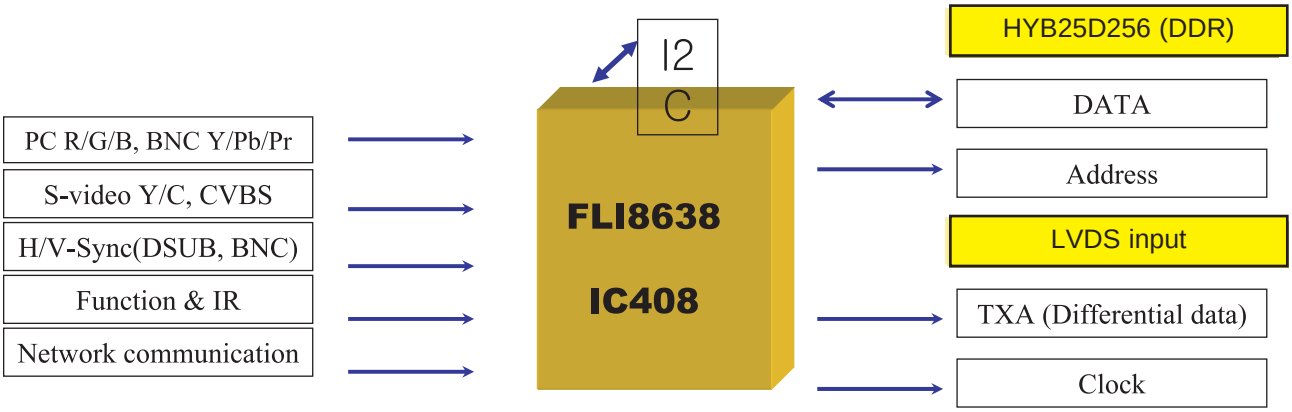




13-1-2 FLI8638

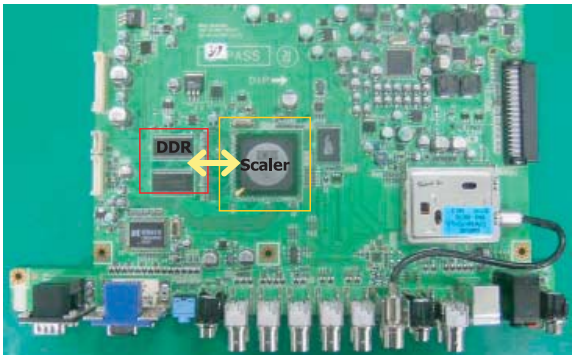
- GENESIS (Þä) Scaler IC
- Video decoder, micom, Image enhancer,
  3-D Comb filter function embedded
- Supports OSD and PIP

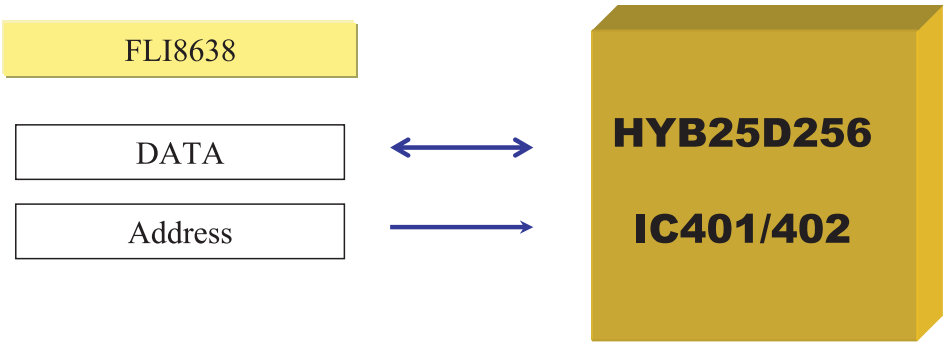




13-1-3 HYB25D256

- 256M DDR Memory



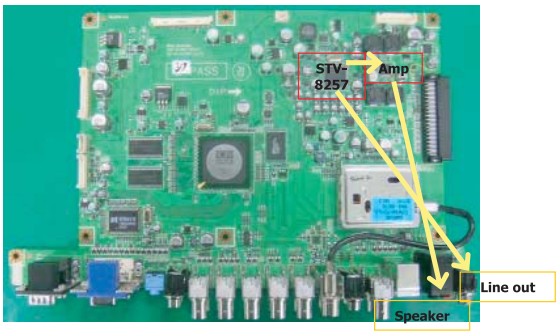


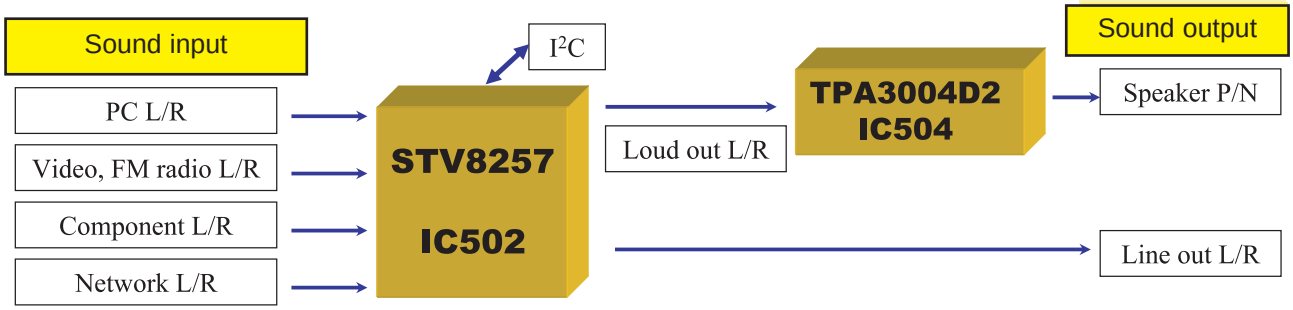
13-1-4 STV8257

- Sound Processor
- Supports the SRS Trusurround
- Lip Sync. function

13-1-5 TPA3004D2

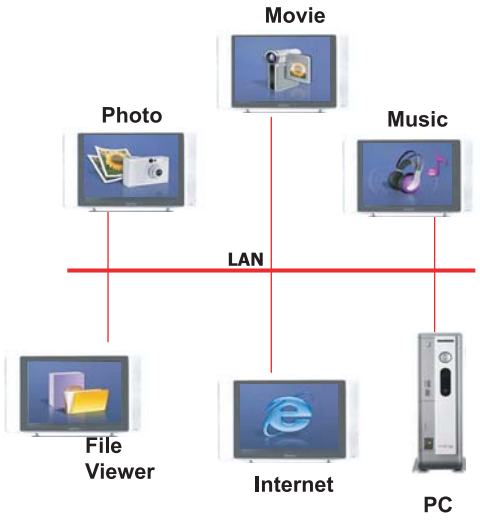
- Sound Amp.
- Receive the signal from the Sound Processor and amplify, then send to the speaker.





13-2 Network Board Part

Network Board (option)
-Supports the Network function using LAN



Movie (MPEG1/2, WMV)

Photo (jpeg, bmp)

Music (mp3, wma)

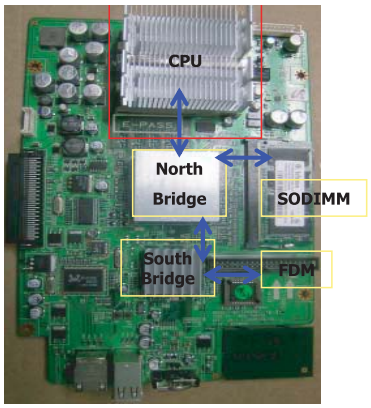
File Viewer

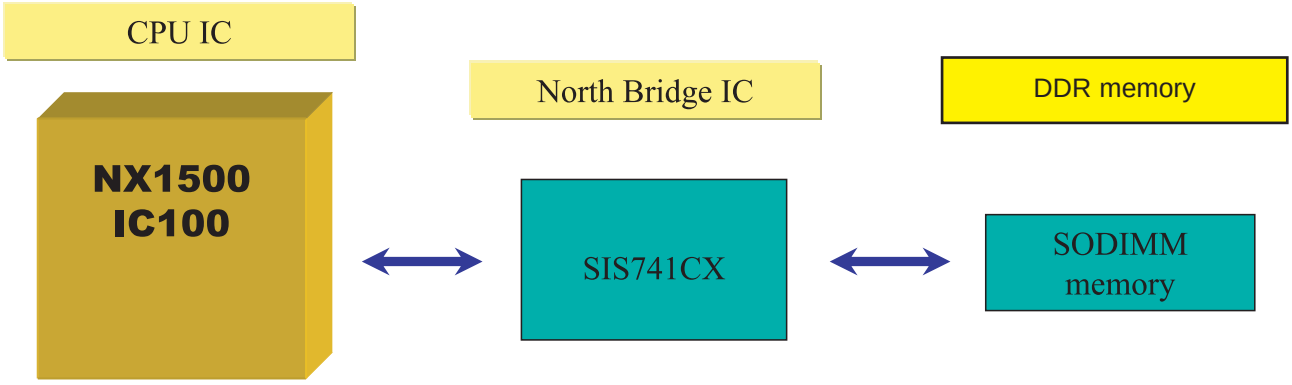
MS – Word, Power Point, Excel Viewer
Acrobat viewer

Web Browsing

13-2-1 NX1500

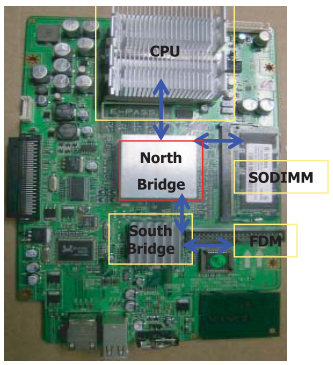
- CPU
- Supports 266 MHz BUS speed
- OPGA (Organic Pin Grid Array) package

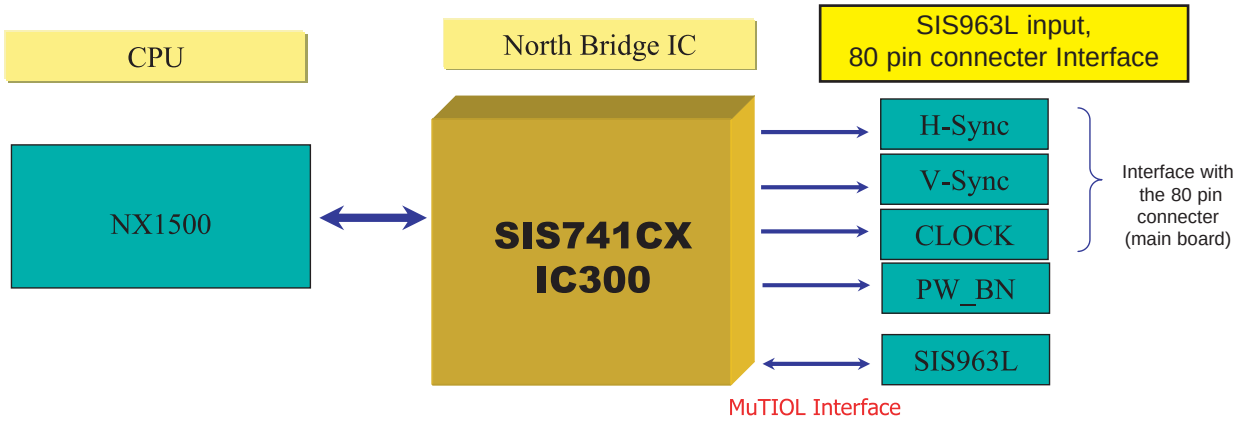




13-2-2 SIS741CX

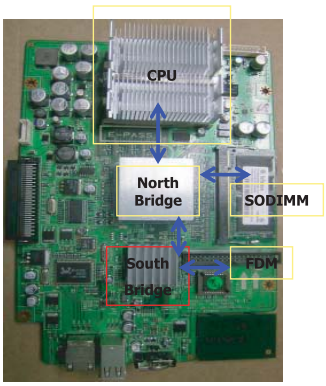
- North Bridge
- Supports FSB(Front Side BUS) 333/266/200 MHz with CPU
- Supports 1G MuTIOL interface with the South Bridge
- Controls the graphic and memory data

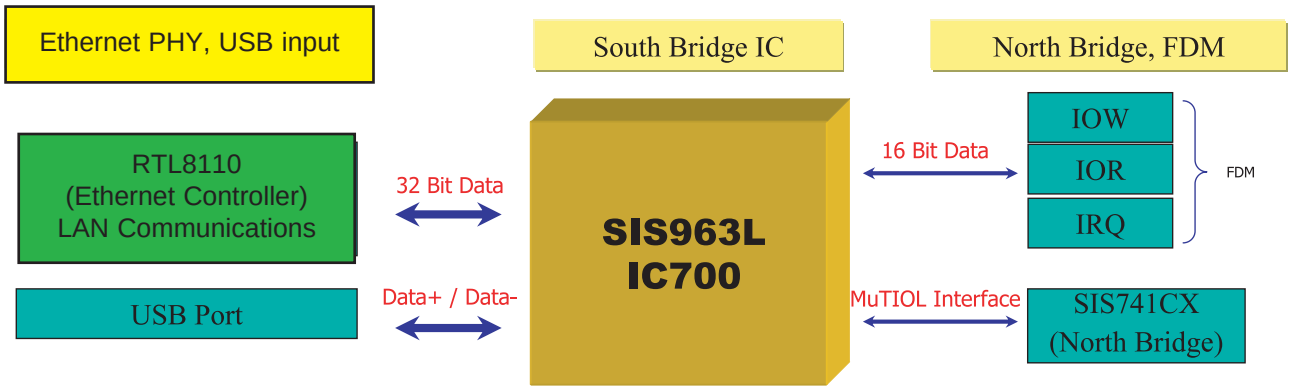




13-2-3 SIS963L

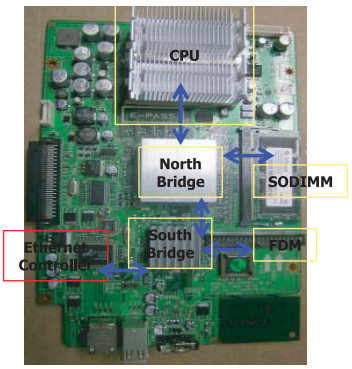
- South Bridge
- Supports FSB(Front Side BUS) 333/266/200 MHz with the CPU.
- Supports 1G MuTIOL interface with the North Bridge.
- Controls peripheral devices.

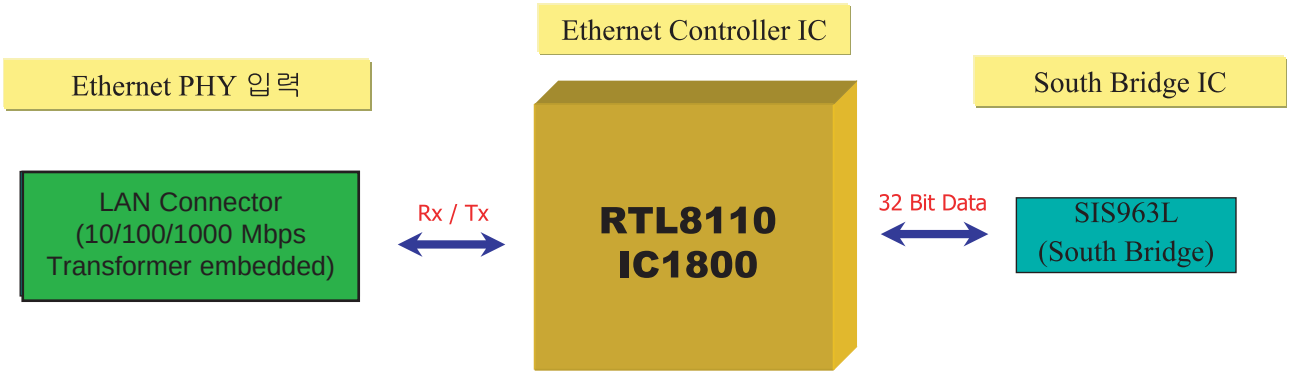




13-2-4 RTL8110

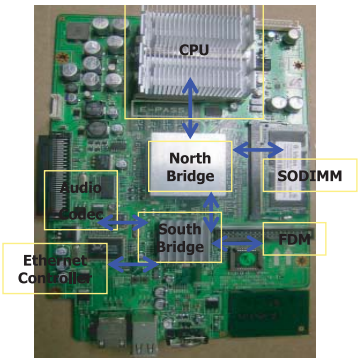
- Ethernet Controller
- Supports 10/100/1000 Mbps LAN
- Uses MAC (Media Access Controller) Address





13-2-5 ALC203

- AC¡¯97 Audio Codec of two channels
- The digital signal from the South Bridge is the ALC203 input signal.
- The Stereo L/R output signal is transferred to the Sound Processor IC on the main board.

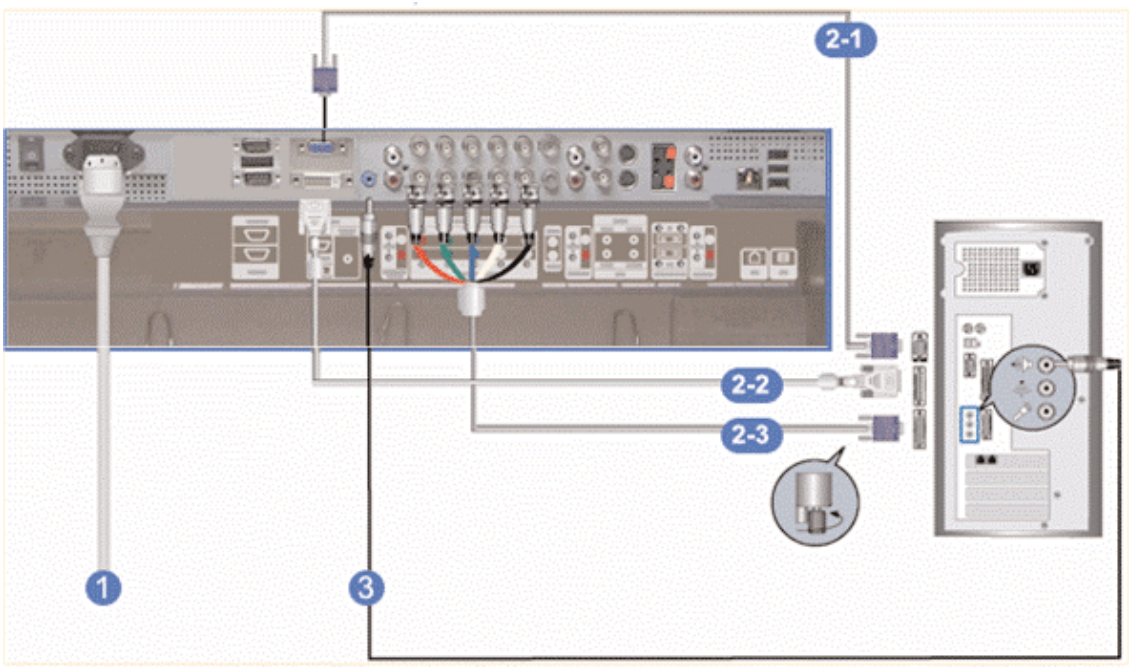


Memo

14 Reference Infomation

14-1 Set UP

14-1-1 Connecting to a Computer



1. Connect the Power cord to 220V or 110V outlet.
2. There are 3 ways to connect the signal cable to your monitor.

Choose one of the followings:

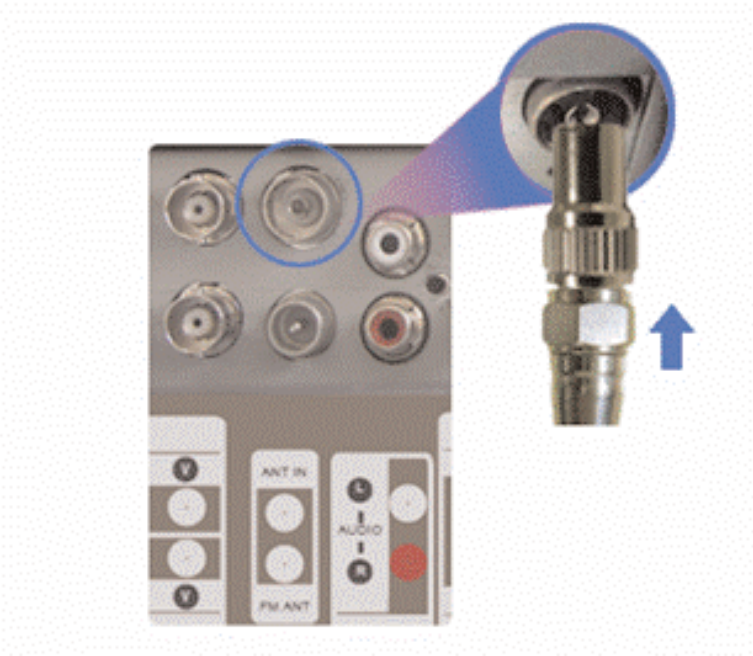
2-1.Using the D-sub (Analog) connector on the video card.
- Connect the D-SUB port of the monitor and computer with the D-SUB cable.

2-2.Using the DVI (Digital) connector on the video card.
- Connect the DVI port of the monitor and computer with the D-SUB cable.

2-3.Using the BNC(Analog) connector on the video card.
- Connect the BNC cable to BNC/COMPONENT IN - R, G, B, H, and V port on the back of your monitor and the D-SUB port on the computer.

3. Connect the audio cable to the audio card speaker output port on the monitor and computer.
4. Turn on both your computer and the monitor.

14-1-2 Connecting to TV



1. Connect the CATV or antenna coaxial cable to the Antenna terminal on the rear of the monitor.
   There are 3 ways to connect the signal cable to your monitor.

Choose one of the followings :

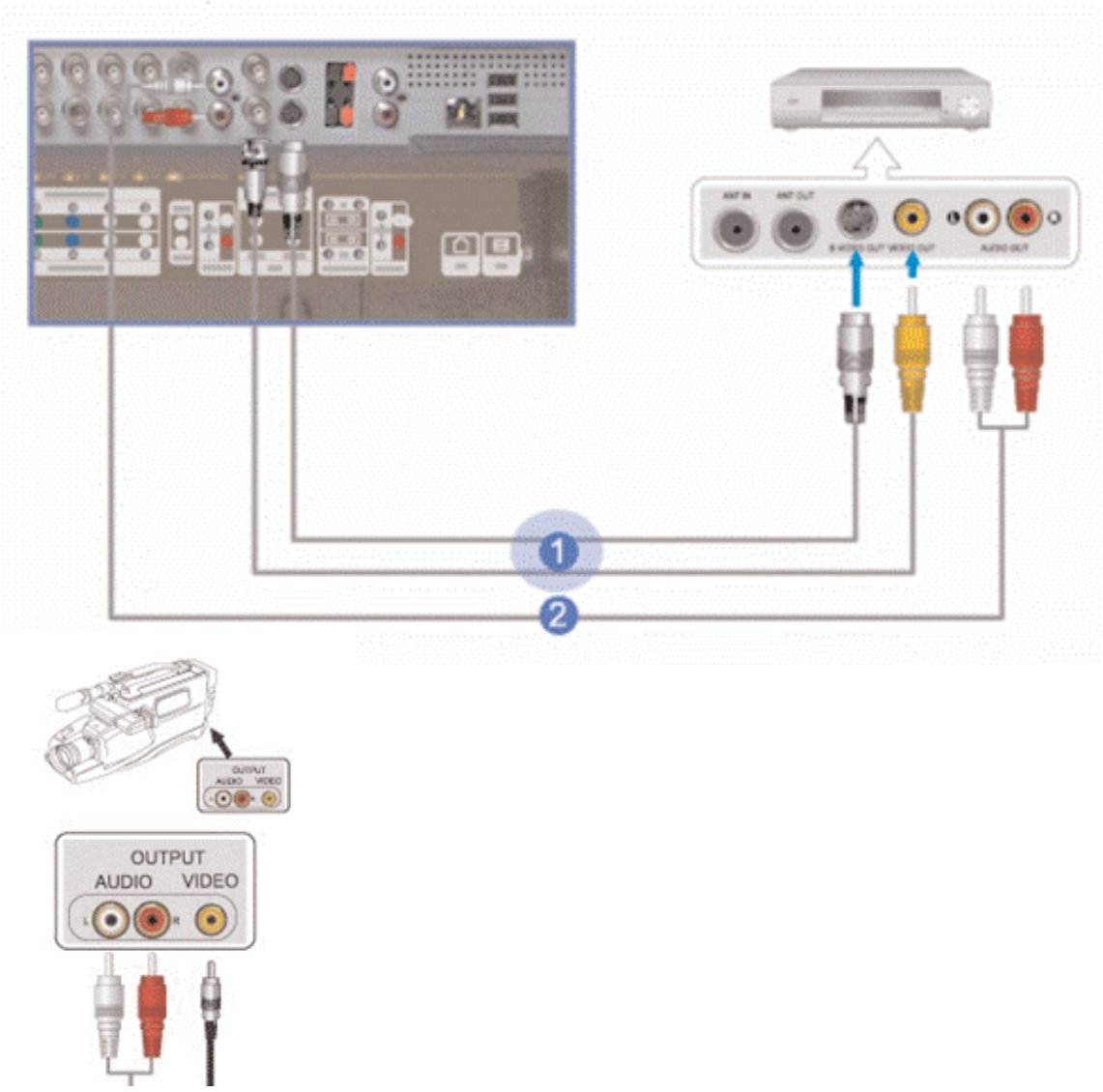
1-1. When using an interior antenna terminal
- Check the antenna terminal on the wall first and connect the antenna cable.

1-2. When using an outdoor antenna
- It is recommended to contact professionals for the antenna installation.

1-3. To connect the RF cable to the antenna input terminal
- Connect directly with the copper wire part of the RF cable.

2. Turn on the monitor.
3. Select TV with the Source button.
4. Select the channel you want.

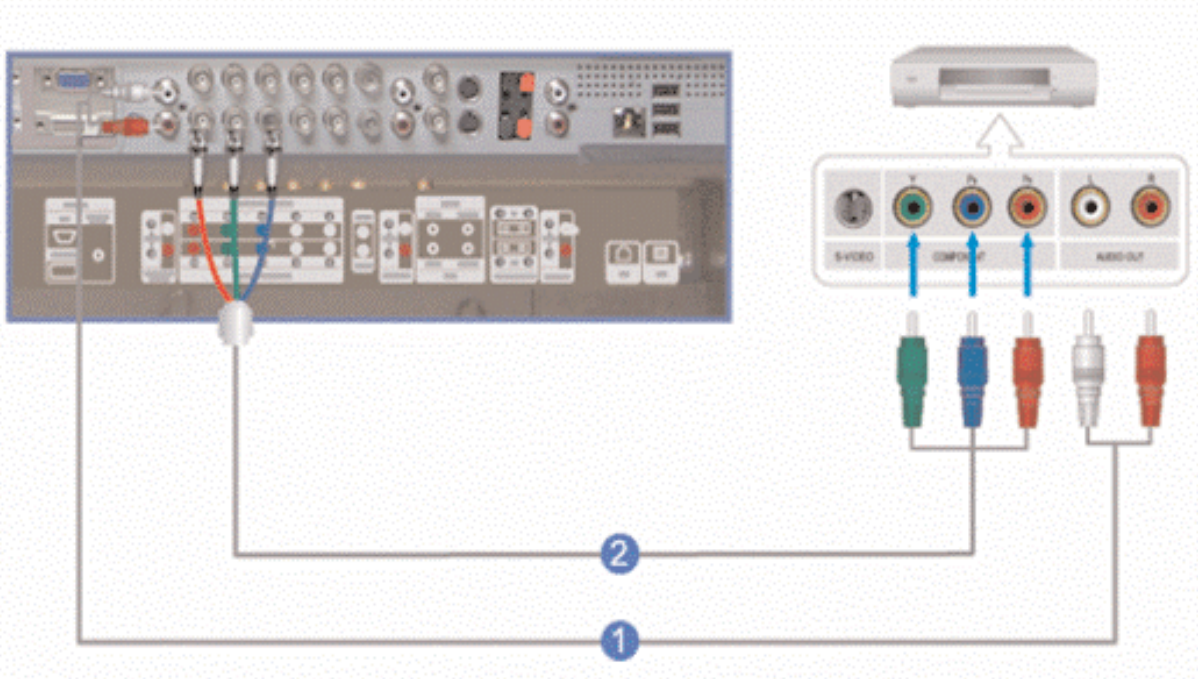
14-1-3 Connecting to VCR



1. Connect AV input devices like DVD, VCR, and Camcorder to AV IN [VIDEO] or AV IN [S-VIDEO] on the monitor with S-VHS or BNC cable.
   *S-VHS or BNC cable is sold separately.
2. Connect the port of VCR and Audio of VCR (L, R) to AV IN [L-AUDIO-R] of the monitor with audio cables.
3. Press the Source button on the front panel or remote control to select AV or S-Video.
4. Insert a tape and press the play button.

※ Reference for Camcorder also

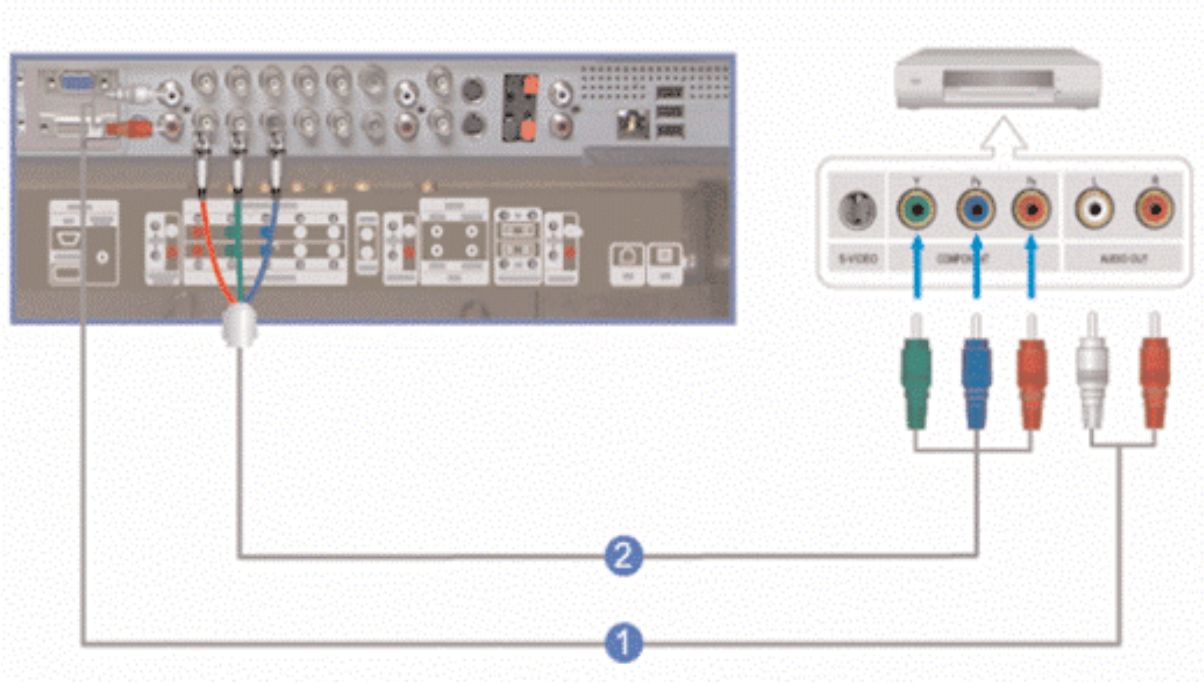
14-1-4 Connecting to VCR



1. Connect the audio cable to the COMPONENT AUDIO IN [L-AUDIO-R] on the monitor and the Audio out put port on the DVD player.

2. Connect the component cable to BNC/COMPONENT IN - PR, Y, and PB Port on the monitor.
 * The component cable is sold separately.
3. Press the Source button on the front panel or remote control to select the Component mode.
4. Insert the DVD and press the play button.

14-1-5 Connecting to DTV Set Top Box



1. Connect the component cable to BNC/COMPONENT IN - PR, Y, and PB port on the monitor and PR, Y, and PB port on the Set-top box.
2. Connect the audio cable to COMPONENT AUDIO IN [L-AUDIO-R] on the monitor and the AUDIO OUT port on the Set-top box.

3. Press the Source button on the front panel or remote control to select the Component mode.

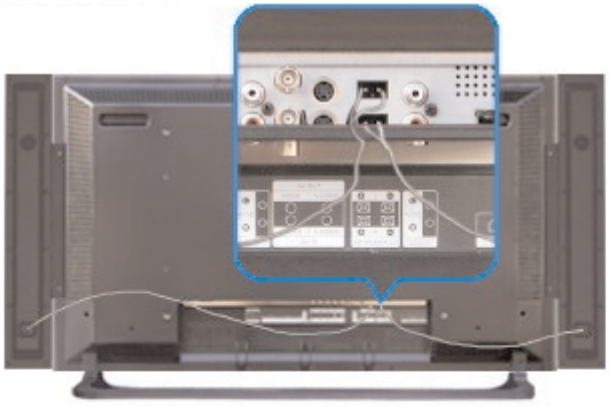
Be sure to match the color of Y, Pb, Pr port when you connect the component of DVD or STB port to view the normal color on the screen.
The input and output ports are separated for DVD or STB. Be sure to connect the output port to the monitor.

14-1-6 Connecting Speakers

1. Tight the speakers to the set using the screws.

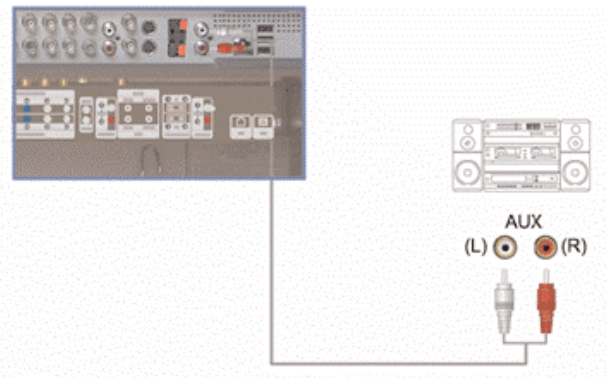
* Mount the speakers to the set without speaker stands.

2. Connect speaker cables between the speaker connectors on the rear of the set and to the connectors on the rear of the speakers.



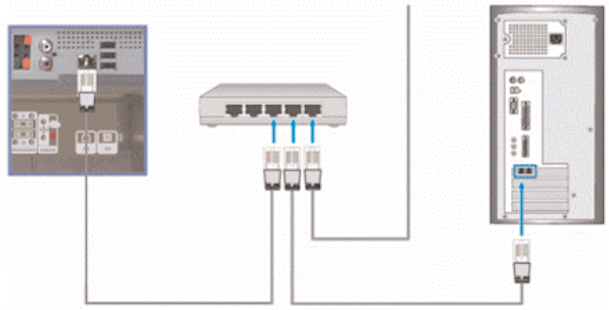
Don't attempt to move the set while grabbing onto the speakers. This may damage the speaker brackets.

14-1-7 Connecting to an Audio System



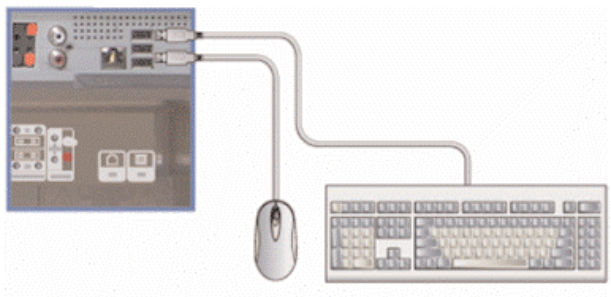
1. Connect a set of audio cables between the AUX L, R jacks on the AUDIO SYSTEM and the MONITOR OUT [L-AUDIO-R] on the Monitor.

14-1-8 Connecting the LAN Cable



1. Connect the LAN cable.

14-1-9 Connecting USB



1. You can connect to USB devices such as a mouse or keyboard.

14-2 Terms

Sync Signal

Sync (Synchronized) Signals refer to the standard signals that are required to display desired colors on the monitor. They are divided into Vertical and Horizontal Sync Signals. These signals display normal color images by the set resolution and frequency.

Types of Sync Signals

-Separate: This is a scheme of transmitting individual vertical sync signals to the monitor.

-Composite :This is a scheme of combining vertical sync signals into one composite signal and transmitting it to the monitor. The monitor displays the color signals by separating the composite signal into original color signals.

Dot Pitch

The image on a monitor is composed of red, green and blue dots. The closer the dots, the higher the resolution. The distance between two dots of the same color is called the 'Dot Pitch'. Unit: mm

Vertical Frequency

The screen must be redrawn several times per second in order to create and display an image for the user. The frequency of this repetition per second is called Vertical Frequency or Refresh Rate. Unit: Hz
Example: If the same light repeats itself 60 times per second, this is regarded as 60 Hz.

Horizontal Frequency

The time to scan one line connecting the right edge to the left edge of the screen horizontally is called Horizontal Cycle. The inverse number of the Horizontal Cycle is called Horizontal Frequency. Unit: kHz

Interlace and Non-Interlace Methods

Showing the horizontal lines of the screen from the top to the bottom in order is called the Non-Interlace method while showing odd lines and then even lines in turn is called the Interlace method. The Non-Interlace method is used for the majority of monitors to ensure a clear image. The Interlace method is the same as that used in TVs.

Plug & Play

This is a function that provides the best quality screen for the user by allowing the computer and the monitor to exchange information automatically. This monitor follows the international standard VESA DDC for the Plug & Play function.

Resolution

The number of horizontal and vertical dots used to compose the screen image is called 'resolution'. This number shows the accuracy of the display. High resolution is good for performing multiple tasks as more image information can be shown on the screen.

Example: If the resolution is 1360 X 768 , this means the screen is composed of 1360 horizontal dots (horizontal resolution) and 768 vertical lines (vertical resolution).

Multiple Display Control (MDC)

A Multiple Display Control (MDC) is an application allowing various displays to be easily and simultaneously operated on a PC. RS-232C, a standard of serial communication, is used for the communication between a PC and a display.

14-3 Timing Chart

The timing no. is standardized by Samsung to apply the same signal to all monitors manufactured by Samsung.

14-3-1 LCD Panel Mode1 mode

*N/I : Non-Interlaced, I : Interlaced

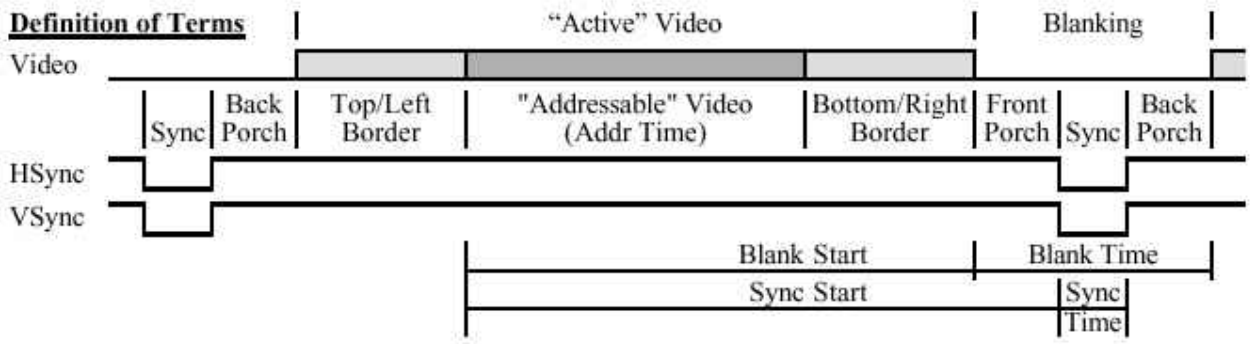
Originator Mode Name Resolution (HxV)	VESA 1360/60Hz 1360x768			
HORIZONTAL Frequency Total time Active time Blank time Border (L / R) Data time Front porch Sync. width Back porch Sync. polarity	 47.712kHz 20.959㎲ 15.973㎲ 5.053㎲ 0.000㎲ 15.906㎲ 0.749㎲ 1.310㎲ 2.994㎲ Positive	blank	blank	blank
VERTICAL Frequency Total time Active time Blank time Border (T / B) Data time Front porch Sync. width Back porch Sync. polarity	 60Hz 16.662ms 16.097ms 0.566ms 0.000ms 16.159ms 0.063ms 0.126ms 0.377ms Positive	blank	blank	blank
Dot Clock	85.500MHz			
Sync. Type Scan Type*	Separate N/I			

14-3-2 Supported Modes (1)

Originator	IBM	IBM	IBM	VESA	VESA
Mode Name	VGA1	VGA2	VGA3	640/72Hz	640/75Hz
Resolution (HxV)	640x350	720x400	640x480	640x480	640x480
HORIZONTAL					
Frequency	31.469kHz	31.469kHz	31.469kHz	37.861kHz	37.500kHz
Total time	31.778μs	31.777μs	31.778μs	26.413μs	26.667μs
Active time	26.058μs	26.058μs	26.058μs	20.825μs	20.317μs
Blank time	5.720μs	5.720μs	5.720μs	5.588μs	6.350μs
Border (L / R)	0.318μs	0.318μs	0.318μs	0.254μs	0.000μs
Data time	25.422μs	25.422μs	25.422μs	20.317μs	20.317μs
Front porch	0.318μs	0.318μs	0.318μs	0.508μs	0.508μs
Sync. width	3.813μs	3.813μs	3.813μs	1.270μs	2.032μs
Back porch	1.589μs	1.589μs	1.589μs	3.810μs	3.810μs
Sync. polarity	Positive	Negative	Negative	Negative	Negative
VERTICAL					
Frequency	70.086Hz	70.087Hz	59.940Hz	72.809Hz	75.000Hz
Total time	14.268ms	14.268ms	16.683ms	13.735ms	13.333ms
Active time	11.504ms	13.155ms	15.761ms	13.100ms	12.800ms
Blank time	2.764ms	1.113ms	0.922ms	0.635ms	0.533ms
Border (T / B)	0.191ms	0.222ms	0.254ms	0.211ms	0.000ms
Data time	11.122ms	12.711ms	15.253ms	12.678ms	12.800ms
Front porch	0.985ms	0.191ms	0.064ms	0.026ms	0.027ms
Sync. width	0.064ms	0.064ms	0.064ms	0.079ms	0.080ms
Back porch	1.716ms	0.858ms	0.794ms	0.528ms	0.427ms
Sync. polarity	Negative	Positive	Negative	Negative	Negative
Dot Clock	25.175MHz	28.322MHz	25.175MHz	31.500MHz	31.500MHz
Sync. Type	Separate	Separate	Separate	Separate	Separate
Scan Type*	N/I	N/I	N/I	N/I	N/I

14-3-3 Supported Modes (2)

Originator Mode Name Resolution (HxV)	VESA 640/85Hz 640x480	MAC 640/67Hz 640x480	VESA 800/56Hz 800x600	VESA 800/60Hz 800x600	VESA 800/72Hz 800x600
HORIZONTAL					
Frequency	43.269kHz	35.000kHz	35.156kHz	37.879kHz	48.077kHz
Total time	23.111μs	28.571μs	28.444μs	26.400μs	20.800μs
Active time	17.778μs	21.164μs	22.222μs	20.000μs	16.000μs
Blank time	5.333μs	7.407μs	6.222μs	6.400μs	4.800μs
Border (L / R)	0.000μs	0.000μs	0.000μs	0.000μs	0.000μs
Data time	17.778μs	21.164μs	22.222μs	20.000μs	16.000μs
Front porch	1.556μs	2.116μs	0.667μs	1.000μs	1.120μs
Sync. width	1.556μs	2.116μs	2.000μs	3.200μs	2.400μs
Back porch	2.222μs	3.175μs	3.556μs	2.200μs	1.280μs
Sync. polarity	Negative	Negative	Positive or Negative	Positive	Positive
VERTICAL					
Frequency	85.008Hz	66.667Hz	56.250Hz	60.317Hz	72.188Hz
Total time	11.764ms	15.000ms	17.778ms	16.579ms	13.853ms
Active time	11.093ms	13.714ms	17.067ms	15.840ms	12.480ms
Blank time	0.671ms	1.286ms	0.711ms	0.739ms	1.373ms
Border (T / B)	0.000ms	0.000ms	0.000ms	0.000ms	0.000ms
Data time	11.093ms	13.714ms	17.067ms	15.840ms	12.480ms
Front porch	0.023ms	0.086ms	0.028ms	0.026ms	0.770ms
Sync. width	0.069ms	0.086ms	0.057ms	0.106ms	0.125ms
Back porch	0.578ms	1.114ms	0.626ms	0.607ms	0.478ms
Sync. polarity	Negative	Negative	Positive or Negative	Positive	Positive
Dot Clock	36.000MHz	30.240MHz	36.000MHz	40.000MHz	50.000MHz
Sync. Type	Separate	Separate	Separate	Separate	Separate
Scan Type*	N/I	N/I	N/I	N/I	N/I



14-3-4 Supported Modes (3)

Originator Mode Name Resolution (HxV)	VESA 800/75Hz 800x600	VESA 800/85Hz 800x600	MAC 832/75Hz 832x624	VESA 1024/60Hz 1024x768	VESA 1024/70Hz 1024x768
HORIZONTAL					
Frequency	46.875kHz	53.674kHz	49.726kHz	48.363kHz	56.476kHz
Total time	21.333μs	18.631μs	20.110μs	20.677μs	17.707μs
Active time	16.162μs	14.222μs	14.524μs	15.754μs	13.653μs
Blank time	5.171μs	4.409μs	5.171μs	4.923μs	4.053μs
Border (L / R)	0.000μs	0.000μs	0.000μs	0.000μs	0.000μs
Data time	16.162μs	14.222μs	14.524μs	15.754μs	13.653μs
Front porch	0.323μs	0.569μs	0.559μs	0.369μs	0.320μs
Sync. width	1.616μs	1.138μs	1.117μs	2.092μs	1.813μs
Back porch	3.232μs	2.702μs	3.910μs	2.462μs	1.920μs
Sync. polarity	Positive	Positive	Positive	Negative	Negative
VERTICAL					
Frequency	75.000Hz	85.000Hz	74.551Hz	60.004Hz	70.069Hz
Total time	13.333ms	11.756ms	13.414ms	16.666ms	14.272ms
Active time	12.800ms	11.179ms	12.549ms	15.880ms	13.599ms
Blank time	0.533ms	0.577ms	0.864ms	0.786ms	0.672ms
Border (T / B)	0.000ms	0.000ms	0.000ms	0.000ms	0.000ms
Data time	12.800ms	11.179ms	12.549ms	15.880ms	13.599ms
Front porch	0.021ms	0.019ms	0.020ms	0.062ms	0.053ms
Sync. width	0.064ms	0.056ms	0.060ms	0.124ms	0.106ms
Back porch	0.448ms	0.503ms	0.784ms	0.600ms	0.513ms
Sync. polarity	Positive	Positive	Positive	Negative	Negative
Dot Clock	49.500MHz	56.250MHz	49.500MHz	65.000MHz	75.000MHz
Sync. Type	Separate	Separate	Separate	Separate	Separate
Scan Type*	N/I	N/I	N/I	N/I	N/I

14-3-5 Supported Modes (4)

Originator Mode Name Resolution (HxV)	VESA 1024/75Hz 1024x768	VESA 1024/85Hz 1024x768	VESA 1280/60Hz 1280x1024 (Reduced Blanking Timing)	
HORIZONTAL Frequency Total time Active time Blank time Border (L / R) Data time Front porch Sync. width Back porch Sync. polarity	 60.023kHz 16.660㎲ 13.003㎲ 3.777㎲ 0.000㎲ 13.003㎲ 0.323㎲ 1.219㎲ 2.235㎲ Positive	 68.677kHz 14.561㎲ 10.836㎲ 3.725㎲ 0.000㎲ 10.836㎲ 0.508㎲ 1.016㎲ 2.201㎲ Positive	 63.194kHz 15.824㎲ 14.066㎲ 1.758㎲ 0.000㎲ 14.066㎲ 0.527㎲ 0.352㎲ 0.879㎲ Positive	
VERTICAL Frequency Total time Active time Blank time Border (T / B) Data time Front porch Sync. width Back porch Sync. polarity	 75.029Hz 13.328ms 12.795ms 0.533ms 0.000ms 12.795ms 0.017ms 0.050ms 0.466ms Positive	 85.997Hz 11.765ms 11.183ms 0.582ms 0.000ms 11.183ms 0.015ms 0.044ms 0.524ms Positive	 59.957Hz 16.679ms 16.204ms 0.475ms 0.000ms 16.204ms 0.032ms 0.111ms 0.332ms Negative	
Dot Clock	78.750MHz	94.500MHz	91.000MHz	
Sync. Type Scan Type*	Separate N/I	Separate N/I	Separate (Analog Only) N/I	

14-4 Preset Timing Modes

If the signal transferred from the computer is the same as the following Preset Timing Modes, the screen will be adjusted automatically. However, if the signal differs, the screen may go blank while the power LED is on. Refer to the video card manual and adjust the screen as follows.

Table 1. Preset Timing

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
MAC, 640 x 480	35.000	66.667	30.240	−/−
MAC, 832 x 624	49.726	74.551	49.500	+/+
IBM, 640 x 350	31.469	70.086	25.175	+/−
IBM, 640 x 480	31.469	59.940	25.175	−/−
IBM, 720 x 400	31.469	70.087	28.322	−/+
VESA, 640 x 480	37.500	75.000	31.500	−/−
VESA, 640 x 480	37.861	72.809	31.500	−/−
VESA, 640 x 480	43.269	85.008	36.000	−/−
VESA, 800 x 600	35.156	56.250	36.000	+,−/+,−
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x600	46.875	75.000	49.500	+/+
VESA, 800 x600	53.674	85.000	56.250	+/+
VESA, 1024 x 768	48.363	60.004	65.000	−/−
VESA, 1024 x 768	56.476	70.069	75.000	−/−
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1024 x 768	68.677	85.997	94.500	+/+
VESA, 1280 x 768	47.776	60.000	79.500	−/+
VESA, 1280 x 1024	63.194	59.957	91.000	+/−
VESA, 1360 x 768	47.712	60.000	85.500	+/+

Table 2. Reduced Blanking Timing Mode(Available in analog Mode Only)

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
SXGA, 1280 x 1024	63.194	59.957	91.000	+,−

14-5 Panel Description

Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	STICKER_CODE	Remarks
SEC	LT140X1-002	BN07-00004A	SA	BN68-00239H	-
SEC	LT150XS-L01	BN07-00009A	SB		-
SEC	LT150XS-L01-B	BN07-00022A	SC		-
SEC	LTM150XS-L02	BN07-00005A	SD		-
SEC	LT181E2-132	BN07-00001A	SE		-
SEC	LT150XS-T01	BN07-00010A	SF		-
SEC	LTM181E3-132	BN07-00019A	SG		-
SEC	LT170E2-131	BN07-10001D	SH		-
SEC	LT181E2-131	BN07-10001E	SJ		-
SEC	LTM170E4-L01	BN07-00018A	SK		-
SEC	LTM240W1-L01	BN07-00015A	SL		-
SEC	LTM213U3-L01	BN07-00016A	SM		-
SEC	LTM150XH-L01	BN07-00026A	SN		-
SEC	LTM150XH-L03	BN07-00027A	SP		-
SEC	LTM150XS-L01	BN07-00032A	SQ		DELL(ZPD)
SEC	LTM181E4-L01	BN07-00034A	SR		PVA
SEC	LTM170EH-L01	BN07-00036A	SS		TN
SEC	LTM170E5-L01	BN07-00037A	SU		PVA
SEC	LTM150XH-L11	BN07-00041A	SV		-
SEC	LTM213U4-L01	BN07-00039A	SW		PVA
SEC	LTM150XH-L01(ZPD)	BN07-00045A	SX		ZPD
SEC	LTM150XH-L04	BN07-00046A	SY		"New panel with high brightness"
SEC	LTM170W1-L01	BN07-00047A	SZ		Panel for TV
SEC	LTM150XH-L06	BN07-00053A	EA		Panel for TV/ High luminance for 450cd _ SONY&EOS Team Panel for TV
SEC	LTM153W1-L01	BN07-00054A	EB		Use NIKE MODEL
SEC	LTM170EH-L05	BN07-00055A	EC		Panel EOS proj. for high brightness of 17" EH-L05
SEC	LTM170E5-L03	BN07-00056A	ED		Dell 1702FP pro. E4. EH mechanicalCompatible
SEC	LTM190E1-L01	BN07-00057A	EE		DELL 1900 FP
SEC	LTM181E5-L01	BN07-00061A	EF		18" narrow bezel GH18PS
SEC	LTM150XP-L01	BN07-00065A	EG		AMLCD PVA PANEL
SEC	LTM240W1-L02	BN07-00062A	EH		Panel for 15" Wide TV
SEC	LTM170EU-L01	BN07-00071A	EJ		Slim design, TN
SEC	LTM170E5-L04	BN07-00072A	EK		E5-L04 6 bits FRC... for IBM
SEC	LTA220W1-L01	BN07-00074A	EL		Panel for 22" TV
SEC	LTM170E6-L02	BN07-00075A	EM		AMLCD Narrow & slim design 17" PVAmode
SEC	LTM170W1-L01	BN07-00082A	EN		LTM170W1-L01 ZPD panel
SEC	LTM170EH-L01	BN07-00080A	EP		LTM170EH-L01 ZPD panel
SEC	LTM170E5-L01	BN07-00081A	EQ		LTM170E5-L01 ZPD panel
SEC	LTM170EH-L05	BN07-00083A	ER		LTM170EH-L05 ZPD panel
SEC	LTM170E5-L03	BN07-00084A	ES		LTM170E5-L03 ZPD panel
SEC	LTM170EU-L01	BN07-00085A	ET		LTM170EU-L01 ZPD panel
SEC	LTM170E5-L04	BN07-00086A	EU		LTM170E5-L04 ZPD panel
SEC	LTM170E6-L02	BN07-00087A	EV		LTM170E6-L02 ZPD panel
SEC	LTM150XH-L06	BN07-00091A	EW		"Color coordinates change for LCD TV"
SEC	LTM153W1-L01	BN07-00092A	EX		AMLCD WIDE 15",9/10
SEC	LTM170W1-L01	BN07-00100A	EY		"Color Coordinates change code management"
SEC	LTM170EH-L05	BN07-00097A	EZ		"LTM170E5-L05 Color Coordinates Change Panel Code"
SEC	LTA400W1-L01	BN07-00109A	S1		"PANEL of AMLCD 40"" TV"
SEC	LTM153W1-L01	BN07-00110A	S2		"Color coordinates change 0.280/0.290, 10000k & ZPD Panel"
SEC	LTM150XH-L06	BN07-00111A	S3		"Color coordinates change 0.280/0.290, 10000k & ZPD Panel"
SEC	LTM170W1-L01	BN07-00112A	S4		"Color coordinates change 0.280/0.290, 10000k & ZPD Panel"
SEC	LTM170EH-L05	BN07-00113A	S5		"Color coordinates change 0.280/0.290, 10000k & ZPD Panel"
SEC	LTM220W1-L01	BN07-00114A	S6		"ZPD Panel for AMLCD 22"" TV"

Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	STICKER_CODE	Remarks
SEC	LTM150XH-L06	BN07-00117A	S7		"ZPD Panel code"
SEC	LTM153W1-L01	BN07-00118A	S8		"ZPD Panel code"
SEC	LTM170WP-L01	BN07-00119A	S9		"PVA Panel for NIKE"
SEC	LTM213U4-L01	BN07-00039A	E1		21.3" NARROW
SEC	LTA260W1-L01	BN07-00121A	E2		VENUS
SEC	LTA220W1-L01	BN07-00074B	E3		"Panel B-level panel code for 22"" TV Panel "
SEC	LTA320W1-L01	BN07-00108A	E4		"Panel for AMLCD 32"" TV"
SEC	LTM213U4-L01	BN07-00124A	E5		NARROW BEZEL 21 " PANEL
SEC	LTM170E6-L04	BN07-00129A	E6		"HIGHLAND 17"" LOW PANEL (Panel only for TCO03)"
SEC	LTM190E1-L01	BN07-00088A	E7		LTM190E1-L01 ZPD panel
SEC	M150X4-L06	BN07-00137A	E8		15" Narrow & Slim panel
SEC	LTA170V1	BN07-00139A	E9		"17"" Panel for Muse 4:3 VGA TV"
SEC	LTM190E1-L02	BN07-00128A	E10		"New Panel from AMLCDl, Specification : 6bit Driver IC"
SEC	LTM170EX-L01	BN07-00143A	E11		"Development new Panel from AMLCD"
SEC	LTM170E8-L01	BN07-00144A	E12		"Development new Panel from AMLCD"
SEC	LTM170E6-L04	BN07-00129B	E13		"ZPD panel for AMLCD (Panel only for TCO03)"
SEC	LTA320W1-L02	BN07-00108B	E14		"Creat B-level Panel code for AMLCD 32"" TV"
SEC	LTM190E1-L03	BN07-00151A	E15		"Development new 19"" Panel form AMLCD (Panel only for TCO03)"
SEC	LTM240W1-L03	BN07-00134A	E16		"AMLCD 24"" panel development"
SEC	LTM190E1-L02	BN07-00128B	E17		"New Panel from AMLCD, Specification : 6bit Driver IC(ZPD)"
SEC	LTM190E4-L01	BN07-00145A	E18		"AMLCD 24"" new panel development"
SEC	LTM170E8-L01	BN07-00158A	E19		"ZPD code derivation"
SEC	LTM170EX-L01	BN07-00159A	E20		"ZPD code derivation"
SEC	LTM190E1-L03	BN07-00151B	E21		"Creat new panel code for AMLCD 19"" (Panel only for TCO03)"
SEC	LTA460H1-L01	BN07-00157A	E22		"creat panel code for AMLCD 46"" TV "
SEC	LTM170EU-L11	BN07-00160A	E23		"creat new panel code for AMLCD 17"" (Panel only for TCO03)"
SEC	LTM240W1-L03	BN07-00134B	E24		"24"" panel ZPD code derivation"
SEC	LTM190E4-L01	BN07-00145B	E25		"AMLCD 19"" ZPD Panel code derivation"
SEC	LTM240W1-L03	BN07-00134B	E26		24" panel ZPD code derivation
SEC	LTM150XO-L01	BN07-00164A	E27		AMLCD 15" XO-L01 new panel development
SEC	LTM150XO-L01	BN07-00164B	E28		AMLCD 15" XO-L01 ZPD code derivation
SEC	LTM170EU-L11	BN07-00160B	E29		AMLCD 17" NEW panel code derivation
SEC	LTA320W2-L01	BN07-00172A	SPZ		AMLCD 32" NEW panel
SEC	LTM213U4-L01	BN07-00124B	SPZ		21.3" Narrow PANEL ZPD Panel derivation
SEC	LTM170EU-L11	BN07-00189A	STH		AMLCD EU-L11 Pb free panel code derivtion
SEC	LTM170EU-L11	BN07-00189B	STZ		AMLCD EU-L11 Pb free panel ZPD code derivation
SEC	LTM240W1-L04	BN07-00188A	SPH		24" A-DCC new panel development
SEC	LTM190EX-L01	BN07-00191A	STH		AMLCD 19" TN new Panel
SEC	LTM190EX-L02	BN07-00191B	STZ		AMLCD 19" TN new Panel ZPD derivation
SEC	LTA230W1-L02	BN07-00184A	SPZ		AMLCD 23" 16:9 new Panel
SEC	LTA260W2-L01	BN07-00185A	SPZ		AMLCD 26" 16:9 new Panel
SEC	LTM240M1-L01	BN07-00195A	SPH		24" panel with high brightness deveiopment
SEC	LTA400W2-L01	BN07-00186A	SPZ		AMLCD 40" 16:9 new Panel
SEC	LTM150XO-L01	BN07-00197A	STH		AMLCD 15" XO-L01 Pb free panel code
SEC	LTM150XO-L01	BN07-00197B	STZ		AMLCD 15" XO-L01 Pb free panel ZPD code
SEC	LTM170EU-L21	BN07-00202A	STZ		AMLCD EU-L21 ZPD new code derivation
SEC	LTA460W2-L03	BN07-00187A	SPZ		BEETOVEN 46"ZPD new Panel
CPT	CLAA150XG09	BN07-00141A	PA		CPT 15" Monitor new panel development
CPT	CLAA170EA02	BN07-00148A	PB		17" CPT NEW development panel
CPT	CLAA170EA02	BN07-00148B	PC		17" CPT ZPD panel code derivation
CPT	CLAA150XG09	BN07-00141B	PTZ		"CPT 15"" panel ZPD code derivation (GOYA-PJT)"
CPT	CLAA150XP01	BN07-00173A	PTH		CPT 15" PSWG code derivation
CPT	CLAA150XP01	BN07-00173B	PTZ		CPT 15" PSWG panel ZPD code

Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	STICKER_CODE	Remarks
CPT	CLAA170EA07	BN07-00174A	PTH		"CPT 17"" PSWG panel code derivation?
CPT	CLAA170EA07	BN07-00174B	PTZ		CPT 17""""" PSWG type new Panel code"""""
CPT	CLAA170EA07	BN07-00174B	PTZ		CPT 17" PSWG type new Panel code
TOSHIBA	LTM15C419(A)	BN07-00002A	TA		-
TOSHIBA	LTM15C423(B)	BN07-00006A	TB		-
TOSHIBA	LTM18C161	BN07-00008A	TC		-
TOSHIBA	LTM15C443	BN07-00031A	TD		-
TOSHIBA	LTM15C458	BN07-00043A	TE		-
TOSHIBA	LTM15C458S	BN07-00077A	TF		"TSB 15"" high brightness Panel"
TOSHIBA	LTM15C458	BN07-00078A	TG		Toshiba ZPD panel
TOSHIBA	LTM15C458S	BN07-00099A	TH		TSB LTM15C458S (ZPD)
HANNSTAR	HSD150MX41A(A)	BN07-00020A	NA		"TTL type"
HANNSTAR	HSD150MX12	BN07-00030A	NB		"TTL type"
HANNSTAR	HSD170ME13	BN07-00180A	NTH		Hannstar 17" TN new panel development
HANNSTAR	HSD170ME13	BN07-00180B	NTZ		Hannstar 17" TN new panel development ZPD code derivation
TORISAN	TM150XG-22L03(A)	BN07-00021A	RA		-
TORISAN	TM150XG-26L06	BN07-00042A	RB		-
TORISAN	TM181SX-76N01	BN07-00048A	RC		-
TORISAN	TM150XG-26L06	BN07-00059A	RD		15" XGA TN MODE(ZPD)
TORISAN	TM290WX-71N31	BN07-00063A	RE		"RS24NS (TORISAN 29"" NEW PANEL)"
TORISAN	TM396WX-71N31	BN07-00064A	RF		"RS24NS (TORISAN 40"" NEW PANEL)"
TORISAN	TM150XG-26L09	BN07-00073A	RG		"Panel for 15"" TV"
TORISAN	TM150XG-26L10	BN07-00089A	RH		"L10(change except D/IC) ZPD"
TORISAN	TM150XG-26L10	BN07-00090A	RJ		L10 NORMAL
TORISAN	TM190SX-70N01	BN07-00098A	RK		Torisan 19" Panel
TORISAN	TM181SX-76N01	BN07-00106A	RL		ZPD Panel code
TORISAN	TM190SX-70N01	BN07-00107A	RM		ZPD Panel code
TORISAN	TM290WX-71N31	BN07-00115A	RN		"Color Coordinates change panel for TORISAN 29"" TV"
TORISAN	TM396WX-71N31	BN07-00116A	RP,Q		"Color Coordinates change panel for TORISAN 40"" TV"
TORISAN	TM22OWX-71N31	BN07-00125A	RR		"Development TORISAN 22"" TV PANEL (ZPD)"
TORISAN	TM22OWX-71N31	BN07-00127A	RS		"Development TORISAN 22"" TV PANEL (HPD)"
TORISAN	TM396WX-71N32A	BN07-00150A	RT		120V inverter Exclusive panel
TORISAN	TM190SX-70N02	BN07-00154A	RMH		Torisan 6bit panel code Derivation
TORISAN	TM190SX-70N02	BN07-00154B	RMZ		Torisan 6bit panel code Derivation
SHARP	LQ181E1DG11(A)	BN07-10001C	PA		-
SHARP	LQ150X1LW71	BN07-00067A	PB		SHARP 15" PVA PANEL
HITACHI	TX38D12VC0CAA(A)	BN07-00003A	HA		-
HITACHI	TX43DVCOCAB	BN07-00060A	HB		17" SXGA PVA MODE
HITACHI	TX43D15VC0CAB	BN07-00101A	HC		ZPD Panel
HITACHI	TX51D11VC0CAB	BN07-00122A	HD		20.1" NARROW
HITACHI	TX54D11VC0CAB	BN07-00123A	HE		21.3" NARROW
HITACHI	TX80D12VC0CAB	BN07-00169A	HIZ		"Development new panel for Hitachi 32"" TV (ZPD)"
HITACHI	TX54D11VC0CAB	BN07-00123B	HIZ		Hitachi 21.3"ZPD panel
IBM	ITSX94S	BN07-00017A	IA		-
UNIPAC	UM170E0	BN07-00028A	UA		Loaded by cisdba
HYUNDAI	HT15X13	BN07-00035A	DA		-

Maker	VENDOR P/N	PANEL_CODE	PANEL_ABB	STICKER_CODE	Remarks
HYUNDAI	HT17E11-200	BN07-00049A	DB		TN MODE
HYUNDAI	HT17E11-300	BN07-00093A	DC		HT17E11-300 ZPD panel
HYUNDAI	HT17E11-400	BN07-00094A	DD		HT17E11-400 normal panel
HYUNDAI	HT17E11-400	BN07-00095A	DE		HT17E11-400 ZPD panel code
HYUNDAI	HT17E12	BN07-00096A	DF		HT17E12 (Narow & slim Design)
HYUNDAI	HT17E12	BN07-00105A	DG		ZPD Panel code
HYUNDAI	HT15X15-D00	BN07-00146A	DH		"Development for Ares 15"" Hydis TV"
HYUNDAI	HT15X15-D01	BN07-00146B	DJ		"Derivation panel HPD for Ares 15"" Hydis TV "
HYUNDAI	HT17E13-100	BN07-00167A	DTH		"PINEHURST-2(IBM) PJT 17"" HYDIS PANEL Derivation"
HYUNDAI	HT17E13-100	BN07-00167B	DTZ		"PINEHURST-2(IBM) Hydis 17"" ZPD code Derivation"
ACER	L170E3	BN07-00044A	AA		TN(ADT)
ACER	M170EN05	BN07-00076A	AB		AU 17" Panel (Narrow & slim design)
ACER	M170EN05	BN07-00102A	AC		ZPD Panel code
ACER	M190EN02	BN07-00170A	AMH		"AU Monitor 19"" new panel development (P19-
1S)"					
ACER	M190EN02	BN07-00170B	AMZ		"AU 19"" ZPD code derivation (ZPD)"
ACER	M170EN06	BN07-00171A	ATH		"AU Monitor 17"" New panel development"
ACER	T260XW01	BN07-00163A	AMZ		"AU 26"" new panel developm
(NF26EO)"					
ACER	A201SN01	BN07-00177A	ATZ		"AU TV panel 20.1"" TN SVGA new panel development"
ACER	M170EN06	BN07-00171B	ATZ		"AU Monitor 17"" ZPD code Derivation
ACER	T315XW01	BN07-00194A	AMZ		AU 32" new
ACER	M170EG01	BN07-00192A	ATH		AU TN PSWG type new Panel code
ACER	M170EG01	BN07-00192B	ATZ		AU TN PSWG type NEW panel code derivation
CHIMEI	M170E3-LO1	BN07-00050A	CA		TN PANEL
CHIMEI	M150X3-L01	BN07-00051A	CB		COMPATIBLE
CHIMEI	M170E4-L01	BN07-00052A	CC		MVA PANEL
CHIMEI	M150X2-L01	BN07-00066A	CD		CHIME 15"I PVA PANEL
CHIMEI	M150X3-L01	BN07-00079A	CE		Chimei ZPD panel
CHIMEI	M170E3-L01	BN07-00103A	CF		ZPD Panel code
CHIMEI	M170E4-L01	BN07-00104A	CG		ZPD Panel code
CHIMEI	V296W1-L01	BN07-00120A	CH		MVA
CHIMEI	M170E6-L02	BN07-00126A	CJ		HIGHLAND 17" LOW PANEL
CHIMEI	M190E2-L01	BN07-00131A	CK		GH19AS,BS CHIMEI PANEL
CHIMEI	M150X4-L06	BN07-00137A	CL		15" Narrow & Slim panel
CHIMEI	M170E6-L01	BN07-00133A	CM		"2003-03-11 vendor change"
CHIMEI	M170E6-L01	BN07-00133B	CN		"ZPD derivation panel"
CHIMEI	V201V1-T01	BN07-00135A	CP		"CHIMEI 20.1"" panel development"
CHIMEI	M170E6-L02	BN07-00126B	CQ		"HIGHLAND 17"" LOW PANEL ZPD derivation panel"
CHIMEI	M170E6-L05	BN07-00152A	CR		"CMO 17"" new panel development code"
CHIMEI	M170E6-L05	BN07-00152B	CS		"CMO 17"" ZPD panel code derivation"
CHIMEI	M150X4-L06	BN07-00137B	CT		Chimei 15" Narrow & Slim panel ZPD derivation
CHIMEI	M170E5-L05	BN07-00165A	CTH		CMO 17" new panel development code (GOYA2-PJT)
CHIMEI	M170E5-L05	BN07-00165B	CTZ		CMO 17" ZPD panel(GOYA2-PJT)

Memo